

TOPOGRAPHY

OF

ASSAM,

BY

JOHN M'COSH,

OFFICIATING SECOND ASSISTANT SURGEON GENERAL HOSPITAL,
OFFICIATING LECTURER IN CLINICAL MEDICINE NEW MEDICAL COLLEGE,
CALCUTTA.

PRINTED BY ORDER OF GOVERNMENT.

Sic magna fuit censuque virisque
Perque decem potuit tantum dare sanguinis annos
Nunc humilis veteres tantummodo Troja ruinas
Et pro divitiis tumulos ostendit avorum.

CALCUTTA:

G. H. HUTTMANN, BENGAL MILITARY ORPHAN PRESS.

1837.

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ERRATUM.

I have been led into an error in considering the Eastern divisions of Durrung and Nowgong, under the name of Nowdwar, as a separate district and charge under Major White ; whereas Nowdwar is the Eastern division of Zillah Durrung, while Zillah Nowgong extends to the River Dhunseri.

J. M'COSH.

To JAMES RANKEN, Esq., M. D.,
Officiating Secretary, Medical Board,

BENGAL.

SIR,

In reply to the Circular of the Medical Board, accompanied by a letter from General Casement, C. B., Secretary to the Government of India, calling for Statistical information, I have the honour to forward the Topography of Goalpara and Gohatti, lately under my Medical charge. Having taken a good deal of interest in the Statistics of Assam generally during a residence of more than two years in the country, and devoted many of my leisure hours towards their investigation, I have now much satisfaction in laying the amount of my knowledge of the whole Province before the Medical Board for the consideration of Government.

Where I have been unable to write from personal experience, I have derived my information from an extensive series of Manuscripts kindly furnished me by the Commissioner of Assam, Captain Jenkins; amongst which were Manuscripts of Buchanan, the late Mr. Scott, and the latest Statistical Reports returned to the Commissioner by all the different Officers stationed throughout the Districts; besides a

valuable Journal written by Captain Jenkins himself, while on Special Survey in Assam. To have assigned to each Officer the credit due to him in its particular place, would have been a task of great labour and often of difficulty ; besides it would in a great measure have been supererogatory, as almost all the papers I have consulted, have at one time or another passed in review before Government.

Where information is drawn from so many sources, it is not easy at all times to preserve consistency throughout, or to write entirely free from error. I am not aware of having transgressed either of these bounds, (further than as stated in the Erratum) though it is not improbable that the eye of the critic may find faults. It may be said that I have written a great deal on men and things I have never seen, and of which I had no experience. To a charge of this kind I have only to reply, that I have had access to the private Journals of men of talent, who have, and endeavoured to communicate the result of their experience : it has been to my disadvantage to be so situated ; and had I been vested with the privileges of a deputation, and assisted with an establishment fitted for research, and collecting and recording information, I believe I could have produced something better than what I now offer.

Some apology is due for the manner in which the prints are executed. Wishing to put Government to the least expence possible, I drew them on stone myself, and their being my first

attempts in Lithography must plead in excuse for their roughness and inaccuracy. I believe they are more expressive of the features of the country than any written description alone.

I have intentionally avoided the use of all technicalities as well as all attempts at abstract science, and have kept in view the object of being useful to the public in general rather than that of scientific research.

Several portions of this paper have already appeared in the India Journal of Medical Science and in the Journal of the Asiatic Society; these I found it necessary to embody in order to render it complete. I have now exhausted my resources; I trust I have left but few things expected from Topography untouched; and shall consider my labour (which has been considerable) well rewarded, if this should meet the approbation of Government.

I have the honour to be,

Sir,

Your most obedient Servant,

J. M'COSH, *Asst. Surgeon,*

Late of Assam.

GENERAL HOSPITAL,
CALCUTTA,
14th June, 1837. }

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ASSAM is that extensive tract of country on either side of the Brahmaputra; stretching on the N. shore from the river Monash opposite Goalpara, and on the S. from Nughurbera hill, about 16 miles above Goalpara, to the foot of the Himayala mountains, close upon the western boundary of China. On the N. it is bounded by a cold mountainous country inhabited by Booteas, Akas, Duphlas, Koppachors, Miris, Abors, and Mishmis; the first being most westward, and the others eastward in succession; the Kangtis, Bor-Kangtis, Singphos and Muamarias, separate it on the extreme east from China and Burma; the Munniporis, Nagas, Mikirs, Cacharis, Kassyas and Garroys from our possessions in Sylhet on the south; while it is connected on the west with Bengal, by the Zillah Goalpara, late N. E. Rungpore. Though geographically speaking, Assam terminates at the river Monash, yet the same peculiar country

1.
Boundaries.

- I. borders the Brahmaputra as far as Jumadpore: has the same climate, and the same change of seasons. Assam may properly be called the valley of the Brahmaputra, navigable branches intersect it in every possible direction, and there is perhaps not a spot of habited ground so situated, as to be more than a convenient distance from some navigable stream.

2.
Face of Coun-
try.

The appearance of the country is very different from that of most others in India; being a perfect flat as far as the eye can penetrate, studded with a multitude of little green conical hills, like hay-cocks in a meadow, rising abruptly from the level plains to the height of from two to seven hundred feet. So very singular are the shapes and arrangement of these mountains in miniature, that the imagination could fancy them the remnants of a country that once stood on the same level with their summits; whose obdurate constituents having resisted the torrents of centuries that washed away the more moveable soil into the Indian ocean, were reserved by Providence as places of shelter and retreat from the floods that periodically inundate the land. Assam is not without some extensive ranges of well cultivated land as is to be found in the zillah of Kamroop. Nor is it entirely composed of alluvial flats; there are some districts of primitive soil far above the reach of inundation, and fit for crops of all kinds. Of these high plains, those at Bishnauth, Chardwar, and Chotegah are the most considerable

Yet strange it is, the inhabitants don't avail themselves of this provision of nature, to raise themselves above the reach of the floods, when they might do so without trouble, expence or inconvenience. They will sit still on the low ground till the water encompasses their huts, and drowns the fires upon their hearths, rather than live comfortably on high dry ground; when the inundation has risen too high for them to wade from one house to another, or even to stand upon their own floors, they paddle out of their houses in canoes, or roost on scaffolds high as the thatch itself, with the frequent calamity of their children falling out of their nests and being drowned. Such is the influence of superstition! for these little hills are believed to be the abodes of devils and unclean spirits, and unless they are consecrated by a religious temple and defended by the followers of Brahmah, it is judged advisable to leave those fiends incarnate in undisturbed possession.

3.
Aquatic habits
of people.

Though the country is at all seasons generally swampy, and intersected with half-filled channels and stagnant lakes, yet in the dry season it is very susceptible of cultivation, and amply repays any labour and expence bestowed upon it by producing abundant crops. The soil is for the most part composed of rich black mould; though occasionally of red stiff clay; so hard and tenacious as to resist the current of the river like rock itself, even when undermined, and thrown down in fragments into the stream. The soil upon the hills is universally

4.
Soil.

1. composed of red rich loam, with a sprinkling of particles of quartz or talc; and if we may judge by the exuberance of the brushwood, they also would well remunerate the cultivators. Large masses of granite are scattered all over these hills and seem indebted for their often whimsical arrangement, to some convulsion of nature.

5.
Brahmaputra.

The intercourse between Assam and Bengal proper is almost entirely maintained by water. There is a free communication between the Brahmaputra and the Ganges, and boats of the largest burden pass by different inosculation out of the one into the other throughout the year. The Brahmaputra may be called the great drain of Assam, and not of it only, but of all the mountainous countries that surround it; the numerous tributary streams of which swell it to a river of the very first-rate magnitude, so as to make it out-rival the great Ganges itself in its tribute to the ocean. History still leaves it doubtful whether or not it receives the waters of the Sampu, of Thibet; though the reasonable presumption is that it does so. Most certainly the Sampu does not flow into the Irawaddi; and unless it flows into the Brahmaputra, and is the same with the Dihong river, it is difficult to account for its course to the sea.

6.
Scenery.

From the uncultivated nature of the country a voyage up is always a tedious one and as dreary a trip as one could well desire; for days and weeks together nought else is visible but sandbanks and water bounding the very horizon, with no trace of vegetation but an endless jungle of





Wm. A. A. & Co. Lith.

impenetrable reeds; without the shadow of an inhabitant, or signs of animal life but water-fowls and alligators. Though this is the ordinary nature of the Brahmaputra, it is occasionally relieved by groups of beautifully wooded hills; whose shape and colour constantly changing by position, gratify the eye with a pleasing panorama till other and nearer groups come into view. As the voyager advances higher up, the scenery improves; and a series of hills innumerable, retiring far away in fine perspective, till their blue conical summits are relieved by the snowy peaks of the Himalaya towering their icy pinnacles midway up to the vertex of the sky, afford one of the grandest scenes in nature. The sight of a hill in this level land is always agreeable; few things more readily summon up before the mind's eye youthful associations; and the stranger hails its appearance like a friend of his boyhood met in a foreign land. Hence the scenery of Assam is always agreeable, and the eye wanders from hill to hill as over faces once familiar, and with happy invention assimilates them with those of his native home.

A voyage up the Brahmaputra is attended with many obstacles not to be met with upon the Ganges. In the dry season there are no beaten paths to facilitate tracking; the boatmen must either force their way through the high reeds on the crumbling perpendicular bank, or scramble along the bottom; or, what they prefer, keep upon the shoal side of the river, where the sand-bank affords good footing, though with the great drawback of the boat's

7.
Navigation.

- I. getting often aground. During the rains the navigation is very much impeded, the banks are overflowed and little or no tracking ground is left; so that pushing along by the slowest of all processes, the bamboo, is the only means of advancing. The prevailing wind being from the east adds no little impediment to the journey. During the cold weather the Brahmaputra is clear and transparent, but in the rains thick and turbid, and at the full flood covered with rafts of pine trees, swept away by its mountain torrents; or by large masses of soil, with the reeds and long grass adhering. The water is esteemed by the natives as good and wholesome, and that blessing is distributed to every village in the country.

8.
Route to Ben-
gal by water.

The usual route from Assam is down the river Brahmaputra via the Jennai, which leaves the Brahmaputra at Jumalpore, passes by the large town Syragegunge, whence it soon after meets with the Pubna river, a navigable branch of the Ganges. After proceeding up the Pubna river for two or three days the boats meet the great current of the Ganges, up which they ascend for three or four days more, till they come to the mouth of the Matabanga or the Jellingi, down either of which they drop to Calcutta. These two rivers are almost dry during the cold season, and during that period the voyage to and fro is made by the Sunderbunds. Of late years the main channel of the Brahmaputra beneath Jumalpore has been almost shut up during the dry season, and the Jennai is now the principal river. The voyage from Goalpara to Calcutta is performed

- in from twenty-five to thirty-five days, and I. from Calcutta to Goalpara in about eight days more.

There are three overland routes from Bengal to Assam. The first by Murshadabad, Mauldah, Dinagepore, Rungpore, Baugwah and Goalpara. This is the line of the Calcutta dawk, but it is almost impassable during the rains. The second road is via Dacca, Dumary, Pucnoloe, Jumalpore, Singymary, and Goalpara, also nearly impassable in the rains.

9.
Routes to Bengal by land.

The third passes by Sylhet, Chirra, Moplung, Nunklow, Ranneygodown, Cannymook and Gohatti, but from its crossing over the Kassya hills it is impracticable to any land carriage, and beast of burden; nor is a journey performed at any season without much difficulty. Another branch of this road after leaving Sylhet passes over the hills by Jyntia, Hautputtree, Nurtung and Nunclung, and joins the river Kullung, about twenty miles from its junction with the Brahmaputra. This last branch is much preferable to the other and much better adapted for carriage. The principal mode of conveyance is by baskets of the shape of a pine cheese, slung over a Kassya's back, and suspended by a stout strap across the brow. One of these sturdy fellows will carry a maund at a time; nor is he at all particular about his burden; but will take up an invalid upon a chair, and convey him over precipices in safety where he could not venture to ride, and was unable to proceed on foot.

10.
Via Kassya Hills.

I. Nature has pointed out a very convenient road across the mountains which could be made as practicable for conveyance as such a hilly country would admit of. The Dyung, a river that communicates with the Brahmaputra, and the Jetinga that flows into the Barak, rise the one on the N. and the other on the S. of the same chain of hills, and both streams are so far navigable that a land conveyance of only six days' march would be necessary to connect them. The intermediate country is so undulating, and the superstrata of rock so friable, that no difficulty would be met with in the formation of a road well adapted for carriage.

11.
Via Dyung and
Jetinga.

There are numerous passes into Bootan along the frontier, some of which lead direct to the Capital. These passes are called Dwars, the principal of which are Bijni-dwar, Buxa-dwar, Now-dwar, and Char-dwar. The two last are more correctly the names of districts, and are so called from their containing the former nine and the latter four passes into the mountains.

12.
Route to Boo-
tan.

13.
Route to Thi-
bet.

Thibet is open to travellers on foot from the extreme east of Assam. The route runs across the Himalaya mountains parallel with the course of the Brahmaputra. The journey from Suddia, the most advanced British post on this frontier to Bhaloo, the first town met with in Thibet is performed by pilgrims in about sixteen days. The following are the towns on the line of march in succession: Suddia, Kudgin, Luckquee, Galoom, Mamanoo, Dullee, Omono, Hullee, Sumlay, Hamay, Kum-day, Rheeshah, Bhaloo. About four days' journey beyond Bha-

I. loo stands the City of Rosheemah, containing fine stone buildings, a large population, and a Government purely Chinese. This route is a very arduous task, the rugged nature of the snowy country is of itself nearly insurmountable, and the hostility shewn by the tribes on the road, to all ingress of strangers, is no less difficult to encounter. The Kangti Chief at Suddia is believed to have great influence with these mountaineers, and is in the habit of giving those devotees, who have the good fortune to obtain his protection, a safe escort to the borders.

There is an open road from Upper Assam into Burma, and thence into China, by which a considerable trade in Chinese and Burmese manufactures is carried on. Indeed the Burmese in their invasions of Assam generally entered it by this route. The line of trade after leaving Suddia passes by Bisa across the Patkoye range of mountains and through the valley of Hoo-koong, to the town of Moon-koong, situated on a navigable branch of the Irrawaddi called Nam-yang. Merchants proceeding from Moon-koong to Ava at once descend the Irrawaddi to the capital; while those to China ascend the Irrawaddi for many miles, to a place called Cat-mow, where they disembark their goods and thence convey them on mules over a range of mountainous country inhabited by Shans (subject to Ava) into the Chinese province of Yunan.

14.
Route to Burma and China
via Hoo-koong.

The intercourse between China and Assam by this route is extremely tedious and can only be followed by a trading people who traffic as they

15.
Route from Brahmaputra
to Irrawaddi
via Noa-
dihing.

- I. go along. A knowledge of the extreme navigable branches of the Brahmaputra has pointed out a much shorter and more convenient path ; and this was travelled over by Lieutenant Wilcox. Tracking up the Noa-dihing which enters the Lohit, the great eastern branch of the Brahmaputra, a few miles above Suddia, Lieutenant Wilcox was able to proceed by water conveyance to within nine days' march of Moon-lang on the Irrawaddi ; and this journey he accomplished without any serious difficulty, or any inconvenience more than what arose from the jungly state of the country.

16.
Importance of
Road towards
China.

Considering the small extent of land that intervenes between the navigable branches of the Brahmaputra, and the sources of the great rivers of Ava, of Martaban, of Cambodia, and of Nankin, an overland communication by means of a good road would be mutually beneficial to the three great nations whose territories there meet ; and would open a direct inlet for the importation of all the valuable productions of Northern Central Asia. It would also tend to civilize the Hill Barbarians who inhabit these regions ; and enable a force to penetrate into the centre of their country ~~whither they can~~ at present retreat before a superior force with comparative impunity ; and in the event of its ever becoming necessary to take vengeance on the Chinese, an armed force embarking on the Brahmaputra could march across the mountains and enter Yunan, one of the richest provinces of the empire.

CHAPTER II.

1, *State of Country.* 2, *Dynasty.* 3, *Origin of.* 4, *Eminence of.* 5, *Decline of.* 6, *Cause of decline.* 7, *Present Rajah.* 8, *Capitals.* 9, *Disqualifications for throne.* 10, *Rasselass' valley.* 11, *Assam Kings.* 12, *Ahom Language.*

This extensive valley, though some centuries ago richly cultivated by an industrious and enterprising people, is now throughout six-eighths or seven-eighths of its extent covered with a jungle of gigantic reeds, traversed only by the wild elephant or the buffaloe ; where a human footstep is unknown, and the atmosphere even to the natives themselves is pregnant with 'febrile' miasmata, and death. The ruins of splendid temples are discovered in wastes and forests long since forgotten : large tanks overgrown and choked up with brushwood, point out the situations of once populous cities : and the furrows of the wild hog or the bear turn up the foundations of buildings unexpected and unknown.

The origin of the Assamese like that of most other races is vague and uncertain, and the traditions extant involve it in superstition and fable. The ancestors of the present dynasty are said to have descended from the celestial regions, at an early age of the world, accompanied with a numerous host of followers, who by force of arms and miracles soon became masters of the country.

II. ^{3.}
Origin. The probable history of their descent is, that early in the 13th century they emigrated from some mountainous country on the borders of China, and took Assam by conquest. Having brought no females with them they adopted wives of the country and increased their stability by intermarrying with the aborigines. They were called Ahoms, spoke and wrote a language different from that of the conquered, and had a system of religion peculiarly their own. They ate beef to the horror of the Hindoos, and pork to the execration of the Mussulmen : cats, dogs, rats and locusts were considered as dainties, and spirituous liquors formed an essential article of fare.

^{4.}
Eminence.

For several centuries these Ahoms held the sovereignty, increasing their territories by valuable conquest, and managing the state with great skill and moderation. The people were brave, powerful and warlike, and during three grand attempts of the Moguls, then in all their splendour, to wrest the kingdom from them, they were repulsed with immense loss and almost annihilated. About 1665 A. D. the reigning Rajah Chukum became converted to Hindooism, and their original god Chung fell into neglect ; the nation soon after adopted the language of Bengal, and the ancient Ahom language became obsolete and extinct.

^{5.}
Decline.

Soon after their conversion the people underwent a total change ; and the prosperity of the kingdom began to decline. Family feuds and civil bloodshed hastened their downfall. Con-

- **II.** **spiracy** was common, assassination a frequent occurrence; few Princes reigned longer than they could protect themselves from public assault; from the dagger of their confidential Ministers, or the poisoned cup of their favourite attendants, and the whole race degenerated into pusillanimity and contempt.

During the reign of the Assam Rajah Gowrenauth Sing, civil wars embroiled the community in constant bloodshed. Life and property were not safe for an hour at a time; whole families were massacred for alleged crimes of their ancestors, though the supposed offenders preceded them by some generations; and five hundred individuals of rank at one time suffered death under a charge of conspiracy. But intestine grievances were not their only calamities. The savage inhabitants of the mountains burst in upon them with the impetuosity of one of their floods; penetrated to their capital itself, plundered their palaces and temples, and carried off thousands into captivity. To complete their ruin, their avaricious neighbours the Burmese, under the pretext of restoring the state to order and prosperity, established themselves in their kingdom; rioting in the few remnants of luxury that were left to their rapacity; reducing the people to the most abject slavery, or horrifying them by the most revolting cruelties. The consequence was, people of influence and substance abandoned a country so precarious to all they held dear; whole districts were deserted to run to ruin and decay; the splendid tanks of public spirited Rajahs, and the luxuriant fields of

6.
Cause of decline.

II. thriving agriculturists were soon buried in a wild of vegetation.

7.
Present Rajah.

The present representative of this once powerful dynasty (Sworgo-deo, or Lord of Heaven, as he is pleased to call himself) now resides at Jorehauth in noisy pomp and tawdry splendour, his resources limited to that of a Zemindar; his numerous nobility reduced to beggary, or to exist upon bribery or extortion; and his Kingly Court (for he still maintains his regal dignity) more resembling the parade of a company of strolling players, than any thing imposing or sovereign. His subjects now amount to about 200,000, his revenue less than a lack and half of Rupees, and his army to 500 militia, commanded by a few commissioned Hindostanis.

8.
Capitals.

The most ancient capital of Assam was Gheergong, more lately Rungpore, was the seat of Government; and for some years past it has been fixed at Jorehauth. Gheergong was a city of immense extent and all built of brick or stone. It stands upon the banks of the little river Dekho, a few miles above the more modern capital Rungpore. It is still the abode of the few Ahoms who have adhered to the faith of their fathers. About ten miles from it is the burial place of the Assam Kings, the city of Azoo. There the sovereigns' remains were deposited in a vault in a magnificent temple, each having his own proper idol buried along with him, together with his ministers of state, his wives, elephants, gold and silver utensils, and a large

- stock of provisions, all of which were provided for his comfort in his state of transmigration. II.

I am afraid I have already dwelt too long upon the Royal family of Assam, and perhaps may be censured for introducing such a subject at all; nevertheless I shall venture upon one other paragraph by way of conclusion. A custom from old time existed amongst the Ahoms, that no individual, however near related to the late King, could ascend the throne, if he had upon his person any blemish or scar. He was equally debarred whether it was occasioned by a scratch received in play, a pit from the small pox, or an honourable wound received in action. The barbarous cruelties that this law gave rise to excite our horror and disgust. Kings were torn from their supremacy, and for ever after incapacitated to re-ascend, by having their eyes put out, their noses or ears mutilated, or a finger a hand or a foot excised; and when any rebel faction gained the ascendancy, all the heirs presumptive, and near relations of the ex-King had their prospects for life extinguished by some mutilation.

9.
Disqualification
on for throne.

Nor did the misfortunes of these unfortunate Princes end there; they were not allowed to breathe the vital air like other men; but were shut up for life in Namroop, a confined unhealthy spot, in the most remote part of the country. The inhabitants of this unhappy valley were once very numerous; but like the Princes of Abyssinia, many of them have made their escape, and fled to other countries.

10.
Rasselass'
valley.

II. The following Table, entire, as drawn up by the Secretary Mr. Jas. Prinsep, and published in the Journal of the Asiatic Society of Bengal, for December 1835, will, I hope, be considered an appropriate addition to this paper.

TABLE XXXVIII. RAJAS of ASSAM—*anciently* KAMRUP.

The best authority is a Native History, (Assam Buranjì.) by Huliram Dhaikiyál Phukan, of Goháti. Beng. era 1236. As. Jour. 1830, p. 297 ; also Mr. Scott's MS. Notes, arranged by Dr. McCosh.—Buchanan is not to be trusted prior to Rudra Sinha.

After bringing down the genealogies to the *Xatriya* Dynasty of *Dravir* (DHARMAPA'LA, &c. who invited Brahmans from *Gaur* to his court, north of the *Brahmaputra* !)

Brahmaputra Dynasty. 240 years.

Shusáuku, or Arimatu, built fort of *Vidyagarh*.

Phainguya, an usurper of the race of Kumuteshvar.

Gujanke, former line restored.

Shukaranku.

Mriganku, without issue ; died A. D. 1478.

Assam divided into 12 petty states.

1498 ——— invaded by Dulal Ghází, son of Hosein Sháh.

Musundár Ghází.

Sultán Ghiásuddín ; after whom 12 states restored, of which *Nara, east of Saumar, has been gradually rising into power, since the middle of the 13th century.*

Indravansa (Indu) Dynasty.

1230? Chu-kapha, became independent and spread conquests, sur-named *Asama* (unequalled,) whence *Assam*.

1268 Chu-toupha, son, defeated the Rája of *Cachár*.

1281 Chu-benpha.

1293 Chu-kangpha.

1332 Chu-khampha ; valley invaded by Muhammed Sháh, 1337.

1364-9 Interregnum of five years ; when the ministers installed.

1369 Chu-taopha, a relation, conquered Chhutiyas.

1372 Chu-khámethepa, a tyrant, killed by his minister.

1405-14 Interregnum of nine years.

1414 Chu-dangpha, conquered as far as the river Kurutoya.

1425 Chu-jángpha, his son.

1440 Chu-phúkpha, ditto.

1458 Chu-singpha, ditto.

1485 Chu-hangpha, ditto.

1491 Chu-simpha, a tyrant, put to death.

II.

- 1497 Interregnum, and Hosein-Sháh's invasion, 1498.
 1506 Chu-humpha, a brother, various conquests.
 1549 • Chu-klunpha, his son, built *Gurgram*.
 1563 Chu-khrunpha.
 1615 Chu-chainpha; introduced reforms; protected Dharmanárain.
 1640 Chu-rúmpha, a tyrant, dethroned.
 1643 • Chu-chinpha.
 1647 Kuku-raikhoya Gohani, dethroned by his brother.
 1665? Chukum, or Jayadhwaja Sinha, adopted Hindu faith; defeated Aurangzeb's general?
 1621* Chakradhwaja (or Brija) Sinha, built fort of *Goháti*; Sáma-grya deva, McC.); repulsed Aurangzeb's general called Chukum?
 1665 Kodayaditya Sinha, attempted to convert the people.
 1677 Parbattia Kunria.
 1681 Lorarája; for some reigns confusion prevailed until
 1683* Gadádharma Sinha; his son Kana set aside.
 1689-1713* Rudra Sinha, built Rangpur and Jorhát; his coins first bear Bengálí inscriptions.
 1715-21* Siva Sinha, established Hindu festivals.
 1723-26* Phulésvarí, his wife, acquires sovereign rule.
 1729-30* Pramathésvarí deví, ditto.
 1732-36* Ambiká deví, ditto.
 1738-43* Sarvvésvarí deví, ditto.
 1744* Pramatha Sinha, made equitable land settlement.
 1751* Rajeswara Sinha, embellished *Rangpur*, allied with Manipur.
 1771* Laxmi Sinha Narendra, younger son, raised and deposed by minister.
 1779* Gaurinátha Sinha, his son.
 1792* Bharata Sinha Mahámári, conquers Rangpur, and
 1793* Sarvánanda Sinha, usurps power at *Baingmara*.
 1796* Bharata Sinha, again attempts, but is killed.
 Gourinátha Sinha, restored by British; died at *Jorhát*.
 1808* Kamaleswara Sinha, or Kinnarám, not crowned.
 Rája Chandrakanta Sinha Narendra, fled to Ava.
 Purandhar Sinha, great grandson of Rájeswara Sinha, expelled Burmese, and
 Chandrakanta, restored, but deposed again, and
 Yogeswar Sinha, raised by Assamese wife of Ava monarch, under Menghi Maha Theluah, the Burmese general and re~~g~~ governor.
 1824 Burmese expelled by English.
-
- 1712* Date of Manipurí square coins.
 1763* Persian coins of Rája Mir Sinh of *Rangpur*.
 1780* Bengálí coins of Jayantea Rája.

* These dates are confirmed by coins in Marsden's Num. Or. and others in Captain JENKINS' collection.

II. According to a paper in the Journal of the Asiatic Society of Bengal, by the Reverend N. Brown, "The Ahom is a branch of the Tai language, which is spoken, with some variations, by the Khamtis, the Shyáns, the Láos, and the Siamese, all of whom designate themselves by the general appellation of Tai. Among the Ahoms, or that portion of the Tai race inhabiting *Assám*, the language is nearly extinct, being cultivated only by the priests, as the ancient language of their religion; while their vernacular and common dialect, as well as that of the people, is *Assámese*. As the Ahoms once ruled over *Assám*, it is somewhat surprising that more traces of their language are not to be found in the present dialect of the *Assámese*, which contains very few words of Tai origin," and "that no trace of Buddhism is to be found in the religion of the Ahoms."

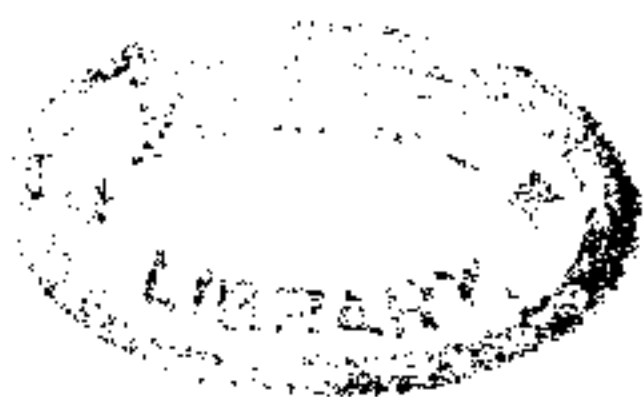


Consonants

A short Inscription of an Assam Rupee.

4. The first part of the paper is devoted to the study of the asymptotic behavior of the solution of the problem (1) for $t \rightarrow \infty$. It is shown that the solution of the problem (1) is bounded and tends to zero as $t \rightarrow \infty$.

Myra Lieb.



CHAPTER III.

1, *People*. 2, *Women*. 3, *Native Christians*. 4, *Burmese Refugees*. 5, *Kyabs or Marwaris*. 6, *Education*. 7, *Slavery*. 8, *Houses*. 9, *Conveyance*.

The Natives of Assam chiefly consist of Hindoos, yet there is a large proportion of Mussulmen also ; but these last are held in such low estimation, that the name "Assamese Mussulman" is a term of reproach. Neither the one sect nor the other are very rigidly observant of high caste principles ; and a greater latitude and ~~toleration~~ exists amongst them, than is observed in other parts of India. A large mass of the population is composed of tribes who originally descended from the Hills in the neighbourhood ; such as Rabbas, Garrows and Cacharies, Kangtis, Mikirs and Miris. Indeed these tribes form so large a share of the population, that it is no easy matter to distinguish the pure Assamese amongst them ; and this distinction is rendered still more obscure by intermarriages with some of the hill tribes. The Assamese have generally been described as a degenerate and weakly race, inferior even to the Bengalies ; but this opinion does not accord with my experience ; and though they are much inferior to the people of the north-western provinces, yet they are as much removed above those of Bengal. They are a shade or two lighter coloured than the Bengalies, with high cheek-bones, and a physiognomy resembling the Chinese. In integrity of character

III.

1.
People.

III. they are estimated very low indeed ; falsehood and knavery prevail to the greatest extent ; they are idle and indolent in their habits, childish and timid in their manners, and perfectly indifferent about providing for their future want. They work for a day or two at a time, and spend the next day or two in listlessness and intemperance ; drinking arrak, or chewing opium amongst the women of the bazar. They have the greatest aversion to hire their services ; and it becomes a matter of necessity to catch workmen like wild animals, and keep a constant watch over them to prevent their running away. Hence it is often a matter of great difficulty for people not in authority to get any work of consequence carried on.

2.
Women.

The women form a striking contrast to the men—they are very fair indeed ; fairer than any race I have seen in India ; and many of them would be acknowledged beautiful in any part of the world. I don't mean Hindostani beauty properly so called ; the Assamese women have a form and feature closely approaching the European. In parts of the country not frequented by Europeans, the women go about in public quite divested of that artificial modesty practised by native ladies in other parts of India. Unfortunately their morality is at a very low ebb ; and a mother thinks no more of contracting for the person of her daughter, than for a duck or chicken, or renting it at a fixed sum per month. In Assam it is reckoned a disgrace to a family to have a daughter unmarried after the age of puberty ; but in the lower castes many

• young women do not succeed in getting husbands till the age of twenty. It is a very common thing for them to break the bonds of celibacy; nor is the giving birth to a child or two considered any disgrace to them, or any impediment to their marriage. The Assamese women are not remarkable for fecundity, indeed they are rather the reverse. Those who marry according to the laws of the country, become mothers so early in life, as greatly to impair their constitution before it is fully developed; and those who are less fortunate, and do not marry till later in life, are by a longer or shorter period of promiscuous intercourse unqualified for procreation. Few families amount to more than three or four, and many of those die in childhood. The Assamese are by the inhabitants of most provinces looked upon as enchanterers; and hence the universal dread they have at exposing themselves to be spell bound in the vale of the Brahmaputra. The women come in for a large share of suspicion; indeed they are believed to be all enchantresses, and the influence of their personal beauty is very unfairly attributed to their skill in the magic art. III.

• At Goalpara there is a small society of Native Christians of Portuguese descent, a remnant of Portuguese soldiers, once entertained by the Nawab of Dacca. They now amount to about fifty or sixty in all. They still adhere to their original religion, and each family has some rude wooden image commonly of the Virgin Mary, cut upon a post and stuck into the ground after the manner of the Hindoos. They

3
Native Christians.

III. have no religious assemblies, nor do they appear to pay any more regard to the Sabbath than the natives. Many years ago the Catholic Priest of Dacca went to make them an annual visit, but that has for some years been discontinued. In dress and habits they are not to be distinguished from the natives. Their occupation is cow-feeding, or that of Chuprasses. They are much feared by the natives, who have as little as possible to do with them. In such a small community marriages are not always to be accomplished amongst themselves; and the solitary party whether male or female occasionally forms an alliance with a Mussulman; but the happy pair are generally cut by both castes. The marriage ceremonies are performed by the Magistrate. I am not aware of baptism being practiced amongst them. They generally assemble at funeral parties, but this is more for the purpose of feasting at their neighbours' expense than from sympathy with the bereavement of the relations, or respect for the memory of the deceased. A great deal of illiberality prevails upon these occasions, and it is no uncommon thing for them to stipulate for certain sweatmeats and liquors and other dainties being produced before they will assist in carrying the bones of their friend to his grave; indeed the authority of the Magistrate is sometimes necessary to enforce their assistance in interment.

In an essay such as this, it would be improper to pass unnoticed a small colony of Burmese soldiers stationed at Sinygmary, in the district

• of Goalpara. During the Assam war, when the Burpese were in possession of the country, these soldiers were posted in the Fort of Rungpore; but were obliged to surrender to the British troops, with the conditions of being allowed to return unmolested to their native country. However they preferred the clemency of their conquerors to the reception they would most likely meet with from the Burmese Government; and sought and received an asylum in the Honorable Company's dominions; had lands to cultivate assigned them, and an advance of capital to enable them to commence farming. This colony originally amounted to about 500 men, but they are now reduced to less than one half that number. Many of them have died, many others have deserted their old Commander Sham Phokun, and taken up their homes in the neighbouring hills; and the remainder having taken to themselves wives of the country are happy in large families. In any disturbance amongst the Garrow tribes these soldiers are available as a police force, and ~~when~~ armed by the civil powers they are found useful, effective and trust-worthy.

• There is a very interprizing class of men called Kyahs, resident in the principal towns of Assam. They are emigrants from Marwar, and seem to have been induced to settle in Assam merely for the sake of trading, and so well have they succeeded, that the whole produce of the country passes through their hands. They are generally wealthy and live in a style of comfort and elegance far superior to the aborigines.

5.
Marwaris.

III. They of course disdain intermarrying with the Assamese.

6.
Education.

Education is still at a very low ebb throughout Assam, and that little is confined entirely to the male sex. Learning was thought too dangerous a power to be intrusted to females: and no man would marry a girl if she could read or write. However the school-master is now abroad in Assam, as well as in other places; and a thriving English school under the management of a European, (Mr. Singer,) appointed by Government is now in full play, at Gohatti. Already the number of pupils amounts to more than 100 boys.

7.
Slavery.

Slavery still continues to a very considerable extent in Assam, and these poor creatures are bought and sold every day for a mere trifle. Every Native on the receipt of more than ten or twelve Rupees a month, has one or more of them; all the drudgery of the household, and the labour of the field is performed by them. Many of them have been enthralled by mortgaging their bodies for a few Rupees; and for want of means of accumulating the original sum increased by exorbitant usury, continue in bondage for life, themselves and their descendants, from generation to generation. Slaves are believed to be kindly treated by their masters; but as might be expected they make frequent attempts to escape. They are valued in the market according to caste; highcaste adults sell for about twenty Rupees, boys fifteen, and girls from eight to twelve. Those of the lower castes do not

- bring more than one-third of the above estimate. **III.**
No slaves are allowed to be exported from Assam.

The houses of the Natives are for the most part elevated upon terraces of clay, about three or four feet high ; the walls are made of large trees roughly hewn, sunk about seven feet into the ground, and covered with mats and reeds, and sometimes plastered with clay. The rich and the poor make use of the same materials, with this exception, that the Baboo's is of larger size, with a finer texture of mats and a higher terrace. In ancient days none but the Rajah was privileged to build a house of brick and mortar, none but he could build a house with two round ends to it : and none but the nobles a house with one round end. In order to provide against the frequent fires that take place, prudent persons have a range of earthen pots filled with water fixed on the ridge of the house, and a ladder by which a man may run up and quench the flames with their contents ; or in the event of the fire having advanced too far to admit of any one's ascending they may be broken with a stone, or a push from a bamboo and the water allowed to escape.* Many of the houses of Europeans in Assam are built of mat and bamboo. A tolerable one with as much comfort as such a house can afford, can be erected for 700 Rupees, but this does not admit of the security of a wooden door or the luxury of a pane of glass.

8.
Houses.

Where water affords so ready and universal a conveyance, carriages and beasts of burden are in less demand ; and so little are their services

9.
Conveyance,

III. turned to any account in Assam, that it is possible to travel from one extremity to the other, and not see a cart, or a laden bullock. Man himself is the only means of burden, and while his plough oxen are recruiting their emaciated carcasses in the skirts of the neighbouring jungle, he carries to the market on *bangies* and at great labour to himself the small surplus of grain the fruits of their combined toil. In the navigation of Assam there is less variety of boats, than might be expected, and where the inhabitants are so dependent upon them that a boat is as common to every house, as a brass *lota*, or an earthen pot. Yet the canoe may be called the only boat peculiar to the country. However, many of these are of size, and capable of carrying one or two hundred maunds, though cut out of the solid trunk of one single tree. Such a thing as a sail is as seldom used as a tracking rope or *goon*; in going down a stream, they are propelled by oars or more often paddles, and in stemming the current they push along the shore with long poles. When bulky cargoes, such as cotton, are brought down the country, a common practice is to fasten two canoes together with transverse beams, so that the canoes remain three or four feet apart; the platform is then loaded with cotton or straw, and in this way they admit of carrying a much larger bulk than they could when un-united and with much greater safety.

CHAPTER IV.

1, *Agriculture*. 2, *Rice*. 3, *Sugar*. 4, *Mustard*. 5, *Cotton*. 6, *Opium*. 7, *Lack*. 8, *Silk*. 9, *Tea*. 10, *Coffee*. 11, *Ratan*. 12, *Plantain*. 13, *India Rubber*. 14, *Gums*. 15, *Ferns*. 16, *Figs*. 17, *Creepers*. 18, *Parasites*. 19, *Palms*. 20, *Fruit Trees*. 21, *Poison*. 22, *Timber*.

As I have already observed, agriculture is not in a forward state; and though famine or even scarcity of provisions is seldom known yet the produce is little more than the consumption. Immense tracts of country are lying waste that might be under profitable crops, and little cultivation exists but in the vicinity of the principal towns.

Rice is the principal crop and that is but of inferior quality. The grain is first sown on a piece of well manured garden land, and when about a foot high is transplanted in masses into larger *Khates* previously ploughed, and in a state of inundation.

Sugar-cane grows well, but the manufacture is carried no further than the state of *Goor*. There are three kinds of cane, the season of planting is in April, and the harvest is reaped in February.

Mustard seed is grown in large quantities, a small portion of it is made into oil, but the

IV.

1.
Agriculture.

2.
Rice.

3.
Sugar.

4.
Mustard.

IV. greater part is exported. It is of two kinds, is sown in November and gathered in February.

5.
Cotton.

Cotton is largely cultivated by the Hill tribes. It is sown in April and pulled in January. A great deal of it is exported.

6.
Opium.

Opium is an important article and is grown to a very considerable extent. The seed is sown in November. In March when the flowers fall, the poppy heads, are scarified diagonally, and the juice is collected on strips of cloth about three inches broad, and when fully saturated and dried, they are tied up into little bundles, and called *Kauni*. In using it about two inches square of the cloth are infused in water and drunk at a draught. The cloth is afterwards chewed like tobacco till its virtues are extracted. The Infusion of the poppy head, or the powdered capsule mixed with water, is also drunk.

7.
Lack.

Lack is prepared in large quantities. The insect is propagated by tying small pieces of stick, encrusted with the gum, upon trees proper for their nourishment, when in the course of three or four months the tree is nearly covered with the family. The branches are broken off and brought to the market as Stick Lack. There are two seasons for collecting Lack; June, and October. The latter gathering is the best. The greater part of the Lack is exported in the raw state—some is converted into shell lack, and lack dye.

There are three principal varieties of silk manufactured, called *Path*, *Moonga*, and *Indy*. The *Path* is of much the finest and costliest quality, and is used only by Natives of rank. The worm that produces it is fed upon the Mulberry. *Moonga* is a stouter and more durable fabric than the *Path*, but coarser and less glossy. The worm that produces it is fed on a tree called *soom*. The *Indy* is of the coarsest quality of all, and is used only by the poor; the worm from which it is obtained is fed on the leaves of the castor-oil plant. All of these silks are of domestic manufacture, and are woven at leisure hours by the females of the family. Families of substance have from three to six looms. A small quantity of *Moonga* thread is exported but very little of the cloth.

IV.

8.
Silk.

Assam, with all its wastes and jungles, however much neglected and abused by man, has not been altogether forgotten by nature in her distribution of the good things of this life. Articles more precious than silver and gold grow wild upon its mountains, uncultivated, and till only of late uncared for.

9.
Tea.

The Tea tree, the identical Tea of China, grows as favourably upon the mountains possessed by the dependent Hill tribes the Kangtis, Singphos and Mattucks, as in the adjoining provinces of China itself, and it only requires the same attention to be bestowed upon its culture and manufacture, to secure the same blessing to our country which has for such a series of years so materially added to the revenues of the Celestial Empire. Tea is the favourite beverage of these

IV. tribes and is constantly drunk by them.* Their mode of manufacturing it is not very refined, it is generally prepared in balls about the size of an eighteen pound shot and as hard as a brick-bat, and in this state it keeps a long time. Tea was known to be indigenous to these parts about ten years ago, and during the Burmese war large quantities of it were sent into Suddia by the Singpho Chiefs. I believe living specimens of the plants were about that time sent down to Calcutta by the Commissioner Mr. Scott, but little or no attention was paid to it. How long the subject might have lain dormant is doubtful, had its existence not been brought to the serious notice of Government by the scientific investigations of Captain Jenkins, Commissioner for Assam, and Lieutenant Charleton of the Assam Infantry. The only difficulty to be overcome, to ensure complete success in the making of tea, is the providing proper Chinese manufacturers, and these, I have been well informed, would readily emigrate in thousands from the neighbouring provinces of China, on having an assurance of safe protection held out to them by our Government.

Mr. Bruce has lately been on a tour to the Singphos, and mixed in social intercourse with them. He saw many thousands of the trees growing in their native soils, and brought away some plants and specimens of the leaves and seeds. The trees were of a very considerable size, so as to merit a higher rate of classification than a plant or a shrub: he measured one of the largest, and found it 29 cubits long, and about four spans in circumference at the base.

The distance of the Tea district from Calcutta though great, can be but little obstacle, when such a noble river as the Brahmaputra is open at all seasons for boats of largest burden, even to the foot of the hills where the Tea grows. IV.

Coffee could be turned to perhaps no less advantage than Tea, and would require less care and attention. On all the lowland hills of Assam it grows abundantly; and continues in blossom a great part of the year, giving the hill the appearance of being covered with snow. Though but a small plant in its natural state, and seldom higher than eighteen inches, yet when cultivated it grows to the height of five and six feet, and stout enough to form a walking-stick. In its present wild state it is not very fruitful, bringing but few berries to perfection; but by proper gardening it might be made much more productive.

10.
Coffee.

The Ratan grows wild throughout Assam, and so luxuriantly as to form the most impenetrable of all jungles. Though not equal to that of the Eastern Archipelago in point of strength and beauty of polish, it is still a most valuable acquisition to the Natives, and when split into withes is converted into every use from that of a rope to a thread, and seems to answer all the purposes as well, and sometimes better. The main stems, some of which are two hundred feet long, though little thicker than the finger, are in mountainous passes wrought into suspension bridges. The

11.
Ratan.

IV. cortex is used for rope in all its uses, and the rind of the spine of the leaves is converted into mats.

12.
Plantain.

The Plantain is another indigenous^d product of Assam, and grows on most of the hills. The fruit is larger than the domestic but full of large seeds ; the pulp is however pleasant in flavour, and is a staple article of food.

13.
India Rubber.

India Rubber is indigenous to Assam ; the tree that produces it being a sort of *Ficus Indica*. It is obtained by making incisions in the bark when the tree is about to get new leaves, and the juice of a milky colour flows freely, and when inspissated in the rays of the sun, becomes black and consistent with the peculiar properties of Caoutchouc. It is however inferior to the American, being very liable to dissolve to a certain extent during the rains, and become clammy, and adhesive.

14.
Gums.

Many valuable Gums are found in the forests, the most important is Gum Copal. It is chiefly found on the Naga hills.

15.
Ferns.

The tribe of Ferns so rare in most parts of India is very numerous, and many of them are very beautiful.

16.
Figs.

Fig trees form a large proportion of the vegetation, but the fruit of none of them is eatable.

There is a countless variety of creepers upon the hills, whose beauty and perfume would render them valuable acquisitions to the bower or the parterre.

IV.

17.
Creepers.

The variety of Parasite plants is numerous and interesting.

18.
Parasites.

The Betel Nut Palm is cultivated to a large extent about most villages; the Cocoa, the Date and Palmyra are rare.

19.
Palms.

Fruit trees of all kinds, with very few exceptions, do not thrive in Assam, and are seldom or never brought to perfection. Either the roots are eaten up by white ants, or the bark becomes cankered or diseased, or the leaves are gorged by insects; and before the abortive fruit is half ripe, it is filled with worms and uneatable. Even those fruits that might be considered indigenous, as the Fig and the Mangoe, share the same fate with the Peach, the Pear, the Plum and the Apricot.

20.
Fruit trees.

One of the most remarkable vegetable productions is a poison used for destroying animal life. It is grown only by the Abors, a mountain tribe, inhabiting the banks of the Sampoo. Its cultivation is kept a great secret, and they carry their precaution so far as to boil it before leaving their country so as to destroy all vegetation. It is brought into Suddia by the Abors, tied up in little bundles, and has the appearance of a small fibrous root. It is prepared for use

21.
Poison.

- IV. by pounding the roots to powder and mixing it up into a paste with the juice of a tree called Otenga, so as to give it tenacity, and make it adhere to the arrow head. So fatal are its effects that even a scratch from an arrow so poisoned, is followed by almost instant death. This is the poison used by all Tiger killers for poisoning their arrows.

27.
Timber.

Assam abounds in many parts with valuable timber, not of the ornamental but the useful, order, chiefly adapted for building or for canoes. The following is a Catalogue of Woods peculiar to Goalpara, as drawn up by Dr. Buchanan Hamilton, and included in the "List of Indian Woods collected by Dr. Wallich." It may be considered a fair statement of the Timbers of Assam.

1. *Acacia odoratissima*. Jotikorai.

Trunk very lofty, but not straight; often 6 feet in girth: wood hard, and used in furniture.

2. *Acacia marginata*. Korui.

5 cubits in girth. Makes good planks.

3. *Alstonia (Echites) scholaris*. Chatian.

A beautiful tree, often 3 cubits in girth, used for coarse furniture.

4. *Alstonia antidysenterica (Nerium antidys.)*
Dudkhuri.

A large tree, often 3 cubits in circumference. Is considered a powerful medicine. Beads are made of it, to be worn round the neck.

5. *Anacardium latifolium*. Bhela.

Grows to a good size; used for making chests and couches.

6. *Andrachne trifoliata*. Uriam.

3 cubits in girth; used for coarse furniture.

IV.

7. *Antidesma*. Boro-helock.

Grows in the mountains; 6 feet in girth; the wood used for furniture.

8. *Aquilaria agallochum*. Aggur and Langchi.

Attains a great size in the low-lands of Assam, and on the lower hills of Gualpara; but in these situations the wood is white, and in no estimation. In the Garo mountains certain parts of the heart of the wood become of a dark-brown colour, and are strongly impregnated with a highly scented oil. When in this state it is usually called Eagle-wood.

9. *Artocarpus Chama*. Kangtali Chama.

The glory of the forests of Gorakpur, where it attains a very great size: used for canoes, for which it is well fitted, being both very buoyant and durable in the water.

10. *Bauhinia Tucra*. Tukra.

A close-grained, soft, tough wood, of a yellow colour.

11. *Bauhinia Bacuria*. Bakuri.

An open-grained, soft, tough wood; 3 cubits in girth: used for furniture.

12. *Bheza Moya*. Moj.

A close-grained hard wood.

13. *Bignonia Colais*. Kolai Beng. Parijat.

Often 5 cubits in girth; used only for fire-wood.

14. *Briedelia stipularis*. Kohi.

Grows to a large size; wood close, hard, tough; used for chests, stools, &c.

15. *Butea frondosa*. Polash.

Sometimes 6 feet in girth; wood open, soft, and tough, but not strong; used in coarse furniture.

16. *Callicarpa arborea*. Khoja.

6 feet in girth; used for mortars, pestles, and common furniture.

17. *Calyptranthes*. Jam.

8 feet in girth; made into planks, but not considered as of good quality.

18. *Calyptranthes*. Saljam.

Seldom more than 3 cubits in girth. A close, hard, tough wood, used for posts, beams, and planks.

IV. 19. Careya. Kombo.

About 3 cubits in girth; wood close, hard, tough, and strong. Stocks of matchlocks are made of it.

20. Cassia Fistula. Sonalu.

6 feet in girth; an open, hard, tough wood, used for ploughs.

21. Castanea. Golsinggur.

Branched prickles on the cup of the fruit; leaves entire; timber excellent, close, hard, and tough.

22. Castanea. Nikari.

Oak or chestnut; cup covered with strong prickles leaves notched; 5 cubits in girth; timber close, hard, tough; used for furniture and canoes.

23. Castanea. Kangta Singgur.

Not exceeding 3 feet in girth; inferior in strength; and toughness to the preceding.

24. Cedrela Toona. Toon or Tungd; Poma; Jeea.

5 cubits in girth; a close, hard, but rather brittle wood, of a brown red colour; very durable, and esteemed for furniture. It has an agreeable smell. The wood under the name of Toon, is extensively used among the Europeans in Portugal for chairs and other furniture.

25. Chotagotadhora, Bengal.

26. Chrysophyllum acuminatum, Roxb. Pithogarkah.

3 cubits in girth; wood white, tough, used in furniture.

27. Chung.

Perhaps a species of Chilmoria. It grows very large, and affords a close tough wood, used in furniture.

28. Croton oblongifolium, Roxb. Parokupi.

5 cubits in girth; a close-grained but rather brittle wood; used for coarse furniture.

29. Croton. Lalpatuja.

3 cubits in girth; a hard close-grained wood, used for small canoes.

30. Dalbergia Momsita, Ham. Momsita.

Attains a considerable size: wood close, hard, and tough; used in coarse furniture.

IV.

31. *Decadia spicata*. Bongyera.

3 cubits in girth. A close, hard, tough wood, used by carpenters.

32. *Dillenia pilosa*, *Roxb.* Daine-oksi.

Trunk 6 feet in girth. Wood open, but hard and tough; used for canoes.

33. *Dillenia pentagyna*. Oksi.

Wood closer, but in other respects very like the preceding.

34. *Dillenia speciosa*. Chalita.

6 feet in girth. Wood close and hard, but rather brittle.

35. *Ehretia serrata*, *Roxb.* Nalshima.

5 cubits in girth; gives planks from 12 to 18 inches wide; wood soft and open-grained, but rather tough; not durable; used for posts and other common purposes.

36. *Ekebergia*. Jiyakohi.

5 cubits in girth; wood like mahogany, very durable, and much esteemed.

37. *Elæocarpus*. Boropatiya.

A close hard wood, of good size, used for canoes.

38. *Elæocarpus Chacrosila*, *Ham.*

A close hard wood, used for mortars, chests, &c.

39. *Fagara Rhetza*, *Roxb.* Bajarmondi.

Wood close, hard, tough; fit for the joiner.

40. *Ficus undulata*. Bakhalpani.

6 cubits in girth; makes good canoes; wood open, soft, rather tough.

41. *Ficus oppositifolia*. Khoskadumer.

3 cubits in girth; wood open, soft, brittle.

42. *Gardenia*. Bonjam.

3 cubits in girth; well adapted for all kinds of turnery ware.

43. *Gmelina arborea*. Gambhari.

Wood light, but durable, does not warp, and is not readily attacked by insects; used for turnery ware of all kinds, and cylinders of a proper size are turned very thin for drums; other musical instruments are also made of it.

IV. 44. *Guarea Amari*.

5 cubits in girth; wood close, hard, and tough; used for canoes.

45. *Guarea Gobara*. *Govorpongyota*.

Used for canoes.

46. *Guarea Alliaria*. *Bosuniyapoma*.

Used for canoes.

47. *Guarea Gotadhara*. *Borogotadara*.

5 feet in girth; wood close and hard; used by joiners.

48. *Hibiscus Lampas*. *Bonkapash*.

6 feet in girth; a soft, open wood, used for coarse furniture.

49. *Jambolifera pedunculata*. *Holhholi*.

3 cubits in girth; used for stocks of matchlocks.

50. *Kalajiya*.

Common over all India; remarkable for the facility with which it grows from cuttings, and from truncheons; yields much gum: wood of no use.

51. *Lagerstroemia parviflora*, *Roxb.* *Sida*.

A large tree, 6 feet in girth, and very common; wood close, hard, and tough, forming excellent timber.

52. *Lagerstroemia Reginae*. *Jarul*.

6 feet in girth, used in boat-building; but the wood is soft and deficient in toughness. It is extensively used in Bengal under the name of Jarul.

53. *Laurus salicifolia*. *Horisongher*.

6 feet in girth; wood has a strong smell of camphor; used for coarse articles of furniture.

54. *Laurus Champa*. *Kurka-champa*.

3 cubits in girth; used for coarse furniture.

55. *Meliacea*. *Tokor*.

A large tree, used for planks, canoes, and coarse furniture.

56. *Mimusops*? *Chalpata*.

A tree of moderate size, used for coarse furniture.

57. *Myginda*. *Silapoma*.

5 cubits in girth; used for coarse furniture.

58. *Myristica*. *Jheruya*.

A sort of nutmeg, but neither the nut nor mace have any aroma: timber 5 cubits in girth, used for furniture.

59. *Nuclea Cadamba*, *Roxb.* Kodom.

A noble tree, 6 feet in girth; wood yellow, used for coarse furniture.

60. *Nerium tomentosum.* Adhkuri.

3 cubits in girth; used for furniture.

61. *Nerium antidysentericum.* Dudkhuri.

Of the same size and uses as the foregoing: beads are also made of it.

62. Nikari.

An oak or chestnut; cup covered with large prickles; leaves notched; 5 cubits in girth; used for canoes and furniture.

63. *Phyllanthus?* Horinhara.

A tree of moderate size; the wood used for coarse furniture.

64. *Premna hircina.* Chikagambhari.

It is often found 6 feet in girth; the wood has a strong odour like the musk rat; it is used for making musical instruments, and for other uses. It is said that no insect will eat it.

65. *Premna flavescens.* Bukdholi.

3 cubits in girth; wood very inferior to the foregoing.

66. Pregulsee. *See Ehretia.*67. *Quercus.* Tima.

Leaves entire; acorns covered entirely by an unarmed cup formed of concentric rings; timber not more than 3 cubits in girth; used for coarse furniture.

68. *Rhamnea.* Bangla.

5 cubits in girth; used for chests, stools, and other coarse furniture.

69. *Rhamnus* (*Premna?*) Gondsori.

5 cubits in girth; used for canoes and chests.

70. *Sapindacea.* Dophari.

A small tree; used for coarse furniture

71. *Schinus Niara* *Ham.* Niyor.

5 cubits in girth: a hard, close-grained, rather brittle wood, with a resinous scent; preferred by the natives to almost any other for furniture.

- IV. 72. Spondias Amara. Amra.**
Grows to a good size, but is not made use of.
- 73. Sterculia. Bahelli.**
5 cubits in girth ; used for canoes.
- 74. Sterculia urens. Odla or Hatchanda.**
5 cubits in girth ; used for canoes. A coarse rope is made from the bark, which is used in taking wild elephants.
- 75. Stravadium acutangulum. Hendol.**
3 cubits in diameter ; the wood much used, but neither strong nor handsome.
- 76. Terminalia Bellerica. Bauri.**
6 feet in girth : used for canoes : the fruit and bark used by tanners.
- 77. Terminalia moluccana. Joynal.**
3 cubits in girth ; used in boat-building, as the timber is both light and durable.
- 78. Terminalia Hilka. Hilkha.**
6 feet in girth ; used for canoes and for furniture.
- 79. Tetranthera caduca. Pangch-Petiya.**
6 feet in girth ; used for chests and common carpentry.
- 80. Tetranthera. Haola.**
3 feet in girth ; wood close and soft ; used for coarse furniture.
- 81. Tetranthera Paromouja. Paromuja.**
6 feet in girth ; wood close and soft ; used for coarse furniture.
- 82. Tetranthera Darodmeda. Vegnal or Bagonal.**
3 cubits in girth ; used for coarse furniture.
- 83. Tomex, or Litsæa Japonica. Uluyaohama,**
6 feet in girth ; used for small canoes.
- 84. Trophis? aspera. Saora.**
3 cubits in girth ; used for joiner's work.
- 85. Uvaria suberosa. Bandorkola.**
3 cubits in girth ; a close-grained, soft, brittle wood ; used for posts, beams, and planks.

IV.

86. *Vangueria edulis*. · **Moyen.**

A small timber tree, 4 feet in girth; used for coarse furniture.

87. *Vernonia*. **Magor.**

3 cubits in girth; used for coarse furniture. The only one of the numerous tribe of corymbiferous plants that grows to be a timber tree.

88. *Vitex acuminata*. **Angchhui.**

3 cubits in girth. A very close, hard, brittle wood; used for mortars of oil-mills, feet of bedsteads, &c.

89. *Vitex Babula*. **Babla.**

3 cubits in girth; wood close, soft, tough; used for coarse furniture, but in little estimation.

90. *Vitex Leucoxylon*. **Bhodiya.**

3 cubits in girth; used in making ploughs; will grow on land that is inundated for weeks together.

CHAPTER V.

1, *Animals.* 2, *Elephants.* *Rhinoceroses.* 4, *Tigers,*
Leopards and Bears. 5, *Buffaloes.* 6, *Cows.* 7,
Horses. 8, *Sheep.* 9, *Hogs.* 10, *Poultry.* 11, *Game.*
 12, *Porcupines.* 13, *Snakes.* 14, *Leeches.* 15, *White*
Ants. 16, *Crocodiles.* 17, *Tortoises.* 18, *Porpoises.*
 19, *Fish.* 20, *Fishing.*

V. Compared with those of most other jungly
 1. countries, there is scarcely any peculiarity in the
Animals. animals of Assam.

2. Wild Elephants are plentiful, and move in
Elephants. large herds, and are very destructive both to the
 crops and to human life; entering villages in
 day light, and plundering granaries, and stores
 of salt, of which latter they are very fond. Great
 numbers are caught every season, and trans-
 ported to other countries; but the speculation is
 very precarious, as many of them die before
 they are domesticated. The plan adopted for
 catching them is by female elephants, called
 Koonkis. The females are driven into the haunts
 of the wild ones, where they are joined by the
 wild males. In the course of the courtship the
Mahouts so contrive to shackle the unsuspect-
 ing gallants to some convenient tree, that they
 are fixed to the spot immoveably, and thus are
 allowed to remain till confinement and want of
 food render them easily tameable. From 700
 to 1000 elephants are exported from Assam
 every year. Their average value is 300 rupees.

A duty of 10 rupees was formerly levied at V. Goalpara on every elephant exported. Great numbers are killed every year merely for their Ivory. The Singphos kill them by poisoned arrows fired from a musket, and after striking out their teeth, leave the carcasses to be devoured by beasts of prey.

The Rhinoceros inhabits the densest parts of the forests ; the young ones are a good deal looked after for transmission to Europe ; but they are so difficult to be found, that a party with two or three elephants don't succeed in catching above one or two in a season, and these when caught frequently die in the nursing. The mode of taking them is to shoot the mother, which is easily done by a large bullet, if struck on the forehead, when the calf is secured. Frequently the mother lays hold of the young one with her teeth, and in her dying agonies, lacerates it so severely that it dies of its wounds. The old ones are frequently killed for their skin or their horn. The skin is valuable, and the best shields in the country are made from it. Great sanctity is attached to the horn ; so much so that the general belief is that there is no more certain way of ensuring a place in the celestial regions than to be gored to death by the horn of the rhinoceros. These horns are as hard as bone, very stout, and broad at the base, and seldom longer than eight or ten inches, though I have seen some at least seventeen : they have a slight curvature towards the forehead, and in colour resemble the buffaloe's. The horn is not a process of the bones of the nose, but united to

³
Rhinoceroses.

- V. them by a concave surface so as to admit of being detached by maceration, or a severe blow. It has no pith, but the centre is a little more cellular than the rest of it. Considering the wild and sequestered habits of these the most retired of all animals, it is surprising how very easily they are tamed. With a little training a young one, a few months after being caught, may be turned loose to feed, and be ridden on by children. They speedily contract a strong affection for their keeper and come at his call, and follow his heels like a dog wherever he goes.

4.
Tigers, Leopards & Bears.

Tigers, Leopards, and Bears, are numerous, but though the tigers occasionally carry off a bullock, accidents to human life are but rare. There is a reward of five rupees a head allowed by Government for their destruction; certain castes adopt this as their profession, and make a good livelihood by it. They generally enter the jungles at the commencement of the cold weather, in parties of twelve or sixteen, but nearly one half their number fall victims to the climate. The *Shikaris* destroy the tigers, &c. by poisoned arrows. Having selected a recently frequented track, they fix a strong bamboo bow, (a modification of the cross bow,) horizontally upon three-forked sticks driven firmly into the ground, and just so high as to be on a level with the tiger's shoulders. The bow being bent, and the poisoned arrow fixed, a string connected with the trigger is carried across the path in front of the arrow, and secured to a peg; the tiger in passing along comes in contact with this string, the bow is instantly let off, and the arrow is lodged

deep in his breast. He is commonly found dead V.
a few yards from the place where he was struck.
The number of these animals killed in this manner is so great, that the amount of rewards absorbs a great portion of the revenue. Every species of deception is attempted by the hunters; old cats with the fur abraded are presented as young leopards, and the naked skulls of dogs and monkeys as half grown ones; some times only the skin of the tiger, without the cranium, and perhaps at another time the cranium without the skin, so that a strict examination, and a knowledge of comparative anatomy, which few but Medical officers possess, is necessary to prevent imposition.

• Wild Buffaloes abound in all parts of Assam, they are not much sought for unless by some castes for eating. They are too fierce and formidable to be robbed of their young with impunity; and as they are seldom found solitary like the rhinoceros, the calves could not be secured even at the expence of the parent's life. The buffaloes of Assam are much larger than those of Bengal; the space between the horns is immense. I have found some the extreme spread of whose horns measured 5 feet 9 inches. It is the practice of the country to breed from the wild buffaloes; no males are kept by the feeders; the tame herd is driven towards the jungles, where they meet with the wild bulls which continue in the herd during the season. Of all the animals that frequent the jungles, the buffalo is the most formidable, and the most to be dreaded when unprotected; and more inhabitants are destroyed by their gore

5.
Buffaloes.

V. than by all others put together. Buffaloes are kept chiefly for making *ghee*; their value is from twenty to thirty rupees; many of them are sacrificed every year.

6. Cows. Cows are of very inferior quality, and are generally in wretched condition. They vary in price from two to five rupees.

7. Horses. There are no horses indigenous to Assam, but the wants are supplied from Bootan. The Bootan ponies are very superior animals, strong, rather handsome, and fit for any work; their prices vary from 30 to 150 rupees.

8. Sheep. Sheep are all imported from Bengal or Bootan. The Bengal ones thrive well but the Bootan do not.

9. Hogs. Wild hogs are very abundant, and almost all the hill tribes domesticate them; price 2 to 3 rupees.

10. Poultry. Poultry is not very abundant; though fowls sell at 12 for a rupee, ducks 8, and geese 4.

11. Game. Wild game is abundant. Deer, hares, jungle fowl, pheasants, peacocks, partridges, ~~florican~~; snipe, and water fowl of all descriptions, are procurable, but no gamekeepers interest themselves in catching them.

The porcupine, the flying squirrel, iguana otter, pangolin, civet cat, and an infinite variety of monkeys and snakes are common to the country.

I once had a pet porcupine at Goalpara, I got him or her (for I could never use the freedom of ascertaining the sex) when very young. It afterwards became so tame as to run out and into the house like a dog, and was wont to make its appearance regularly at meals, and ate from my hand any thing that was at table, whether flesh or vegetable. It had a great deal of comic humour if I might so call it, and whether to gratify this whim, or from love of stolen treasure, became a great thief. Nothing that it could carry away was safe; a stick or a shoe, a boot-hook or a broken bottle, was dragged to its nest, but as it never meddled with any thing that was not on the floor, we were easily able to keep things out of its reach. Latterly this habit became very inconvenient; if any thing fell off the table and was neglected, it was certain to be carried off. On searching its hoard the lost article was frequently found, but I had sometimes reason to think, the porcupine was blamed for taking away things he had no share in. It became the torment of the dogs, and was wont to take a fiendish pleasure in pricking and annoying them. It had a large share of courage, and in fair field was more than a match for any one dog, for it had only to keep its tail towards him to save its head, the only defenceless part about it; sometimes two dogs set upon it at once, and on such occasions it took to its heels, but it only ran to the nearest corner of the room and spreading out its quills, so as to fill the corner, looked back at its persecutors with cool contempt.

V.

12.
Porcupines.

V. I never in any of its most fretful humours saw an instance of its throwing its quills to a distance, nor do I believe it has the power of doing so. It has a certain range, probably two or three inches, within which it can strike, and in some cases so severely, that the quill leaves its back and sticks fast in the object struck. This effect seems produced by muscular action, and the quills are jerked forward spasmodically as if by a spring attached to them. If a quill happened to be loose when it made an effort to strike, I could imagine it being propelled to a distance, but not if fixed in its natural state. I remember a striking instance of the force with which the porcupine can wound. A friend was dining with me one evening, and the porcupine as usual was under the table amongst our feet; the Gentleman began to tease the porcupine, when in an instant he changed countenance, and said he thought the porcupine had struck him. He expressed much pain, and on pulling off his boot his toe was streaming with blood. I took up the boot and found a quill sticking fast in it, and on introducing my hand, found about a quarter of an inch of the quill projecting inside. The boot was made of leather, the wound of the toe healed without any bad effects. The porcupine was very cleanly in person as well as in all its habits, and made no distinction between the night and the day.

I have dwelt so much on the history of the porcupine, because even to this day there are

different opinions as to his power of throwing his quills. I trust the rare opportunity that I had of observing his manners will justify this episode. V.

Snakes of many kinds are numerous, and occasionally take up their quarters in the houses. Some of the largest have been caught in the roofs of houses inhabited by Europeans. The boa, or as some call it, the python, has been known to enter the poultry-house and carry away fowls. Such has been reported to me by my servants; though I have not witnessed it, I think it probable enough. Few of the snakes are poisonous. The wildest natives are aware of the harmless nature of the python. I remember two or three Garrow prisoners bringing a large one alive to me, which they had caught on the hill. One man grasped it by the throat, and the other two bore the weight of the body. They turned it loose in the compound in order to shew its action, and readily seized it again with their hands. I believe they afterwards took it home and ate it.

13.
Snakes.

Leeches of several varieties abound in all parts of Assam. The medicinal leech is procurable for about one rupee per hundred, and is to be found at all seasons. There is a species of land leech prevalent upon the hills of Assam. At certain seasons, particularly during the rains, every bush and blade of grass is frequented by them, and it is impossible to walk a few yards through the jungle, without two or three attaching themselves to one's clothes. They are exceedingly small, seldom thicker than a crow

14.
Leeches.

V. quill, and so well armed that they readily bite through a worsted stocking. I believe they might be used for curative purposes as safely as the medicinal leech. I have been bit by hundreds of them, and never knew any bad consequences from their bite.

15.
White Ants.

White ants occupy a prominent place in the animal œconomy of Assam. In no part of India are their ravages more destructive. They devour the very houses as they stand, from the main posts sunk seven feet under ground, to the last bundles of thatch upon the ridge; and the durability of a house may be calculated by the dead mass of wood, thatch, and bamboo, in its construction; for a house is only valuable, or otherwise according as it contains, a larger or a shorter supply of provender for the white ant. The furniture requires to be constantly looked after; the feet of a table or a chair are very liable to disappear, and whole trunks may be eaten up though no outward signs be discernible. The white ants make as free with the trees of the forest as with the houses; and probably every tenth tree met with falls a prey to their voracity.

The other domestic plagues are musquitos, sand flies, and fleas. Musquitos are not numerous, and for the most part disappear in the cold weather. Sand flies are often annoying, and in spring almost every house swarms with fleas, but these last seldom bite.

16.
Crocodiles.

Crocodiles swarm in all parts of the Brahmaputra; they generally frequent some creek or bay where there is little or no current, and hav-

ing a sloping shore with a convenient retreat to plunge into deep water on being disturbed. During the heat of the day they lie basking on the sand in the sun; in the evening they return to the river and swim about on the surface of the water apparently in search of prey. There are two distinct species of the crocodile family; the long nosed one gavial, or gurrial, and the round headed one muggur or bocha. The gurrials are gregarious animals and are commonly found in groups of four or half-a-dozen, the muggurs are solitary or only found in pairs, probably male and female, and are frequently found in tanks at a distance from the river. The gurrial is considered inoffensive by the natives, the muggur savage and dangerous, and on many instances they have been known to carry off individuals while bathing in the river or standing on the margin, and even to attack cattle. No friendship seems to exist between the gurrial and muggur: I do not remember ever seeing them in company. The gurrials are much more numerous than the muggurs. Both these animals are easily killed by a bullet if hit in a vital part. The inhabitants of some parts of Assam spear the gurrials and extract an oil from their bodies, and many of them have no objections to eat their flesh. The natives place a great deal of value on their teeth, and believe that one of them worn round their waist imparts the charm of making them more acceptable to the fair sex; certain it is, that it is almost impossible to keep the teeth in the head of a skeleton, as the servants are sure to steal them.

- V. Both species possess the means of re-producing their teeth when lost, and two or three embryo ones are ready in each socket to spring forth for use when an old one is broken. It is worthy of remark that the manner of putting forth the embryo tooth in the two species is very different. The young tooth of the gurrial advances straight through the hollow centre of the broken stump and carries it out of the jaw on its point, whereas that of the muggur shoots forth like a sprout on the innerside of the old tooth, and eventually pushes it out on one side by its shoulder. Hence probably a reason why the teeth of the gurrial are so regular, and those of the muggur so much the contrary; the new teeth of the former always taking up the position of the old ones, whereas those of the latter do not. This is a peculiarity that I do not remember to have seen stated in the natural history of these animals, but I believe it to be specific.

17.
Tortoises.

Tortoises are numerous and of all sizes, from that of a frog to that of a pack-saddle. They spend a large portion of their time sitting on lumps of clay on shore, they are extremely wary, and seldom move farther from the water than they can leap into it at one jump. They are no less timid in the river than out of it, and dive to the bottom on the slightest alarm. Tortoises are frequently caught in nets by the fishermen and form a staple article of food in the bazars. They are exposed in the market alive with their hind and fore legs on each side tied together, they are sulky and fierce in their bonds, and bite any living thing that disturbs them, and woe

to the finger or toe that they once get into their bony jaws, for they seldom let go their hold.

V.

Porpoises (*Delphinus Gangeticus*) (Soos-Nat) are common, their favourite resort is the entrance of some tributary stream into the main river, where they are all day busily employed in pursuit of their prey. They are occasionally caught in nets, more by accident than from any design against them, and are either eaten or boiled down into oil. They are sometimes hunted in their native element by the inhabitants as they would hunt a hog, and the chase forms one of the most exciting amusements that can be imagined. The porpoise is generally attacked in a blind bay or *nulla*; the hunt is opened by a fleet of canoes scattered all over the bay, beating the water with their paddles and making a loud noise; the instant the porpoise rises to the surface some spearman is near him either to strike him or frighten him by beating the water; away he darts to another place to complete his inspiration, when he is closely pursued or met by another spearman; again he is disappointed in his mouthful of air, and again he dives and rises only to be again tantalized; till after running the gauntlet between the canoes, he is terrified and exhausted; and lies panting on the water, the prettiest mark possible for the spear, and becomes an easy capture.

18.
Porpoises.

The Brahmaputra abounds in a great variety of very fine fish, amongst which are the mullet, the hilsa, and the rue. The sudder stations are for the most part supplied well.

19.
Fish.

V.
20.
Fishing.

Fishing in Assam is carried on almost entirely by nets : very few hooks are used. It is either a joint stock, or a family concern. Where the establishment of nets is so large as to go across the river, a great portion of a village is connected with it ; but these extensive fisheries are rare. The market is for the most part supplied by single canoes managed by two men furnished with a triangular net extended between two long bamboos. One man at the stern propels the canoe down the stream ; while the other at the bow guides the net along the bottom, and when he has caught a fish he shovels it up above water. When they have dropped down the stream beyond the good ground, they pull up their net and paddle up the stream to where they began. Another mode of the triangular net and more consonant with Assamese habits, is to fix it to a frame-work of bamboo, on the side of the river so as to admit of its being moved on a fulcrum like a lever ; the long end with the net attached is allowed to sink to the bottom, a man stands by watching when any fish may chance to come over the net ; and when a favourable moment arrives, he steps or sits down on the shorter end and raises the net to the surface, when the fish is sometimes taken by surprise and caught. At the end of the rains when fish begin to leave the smaller streams that run dry in the cold weather, every rivulet is stockaded across with nets ; only a narrow outlet being left in the centre. In this outlet a bag net is fixed, so that every fish that attempts to escape is secured, and eventually every fin in the nulla.

CHAPTER VI.

1, *Gold.* 2, *Silver.* 3, *Iron.* 4, *Coal.* 5, *Lime.* 6, *Precious Stones.* 7, *Amber.* 8, *Salt.* 9, *Petroleum.* 10, *Hot Springs.*

Gold dust is found in almost all the mountain streams that flow into the Brahmaputra; and even in the great river itself as far down as the hill Nughurbera. That of the best quality is found in the rivers Jengloo and Dikrung, and is valued at 16 rupees per *tola*. The gold gatherers after selecting a sand bank begin the process by passing the sand through a sieve so as to free it from any lumps of clay, stones, weeds, &c. It is then mixed with water in a trough and thrown upon an inclined wooden plane with transverse grooves cut upon it. The sand is thus in a great measure carried off and the gold from its gravity lodges in the grooves. Whether it be that even gold is held cheap when got for the gathering; or that from the gold gatherers in former times having frequently been robbed, or made objects for extortion, they gave up their trade, gold dust is now but little sought after, and those few who still practice it earn but a scanty subsistence from a laborious and dirty occupation. Many of those who still gather, work only at night to avoid suspicion.

I am not aware of silver being found native in Assam, nor of more than one mine amongst the mountain tribes, and that is in the country of

VI.

1.
Gold.2.
Silver.

VI. the Bur-Kangtis near the sources of the Irrawaddi. It is said to produce about 80,000 rupees per annum ; almost all the silver used in Assam is imported from China in a state of bullion, and is afterwards coined, or manufactured into ornaments. This bullion is the only article of circulation in the trade between the Assamese and Chinese. It is a very rude attempt at coining. The pieces are of a round shape, impressed with rude Chinese characters, and appear to have been cast in little moulds made in the ground with the finger. Not two of these masses are of the same value, or size ; their worth is estimated by their weight, which varies from 2 to 10 rupees. The hill tribes in dealing in articles of small value chop them up into pieces, and thus make them quite convenient. This *Kucharoop* as it is called, is eagerly purchased by the Assamese hill chiefs, who alloy it heavily and issue it as their own coin.

3.
Iron.

Iron is found abundantly in almost all the hill countries. It is obtained principally from a ferruginous clay which, after being cleared of a portion of its earthy constituents by washing, is afterwards melted in little furnaces of clay. By this simple process adopted by the natives, four men can fuse about sixteen seers in a day. The best iron is found in the Bur-Kangti country, and is manufactured to great perfection by a wild barbarous tribe called Koonoongs. The *daws* made by that tribe are valued very highly and are of superior metal. Almost all the *Koodals* (hoes) used in Assam are manufactured by the Kassyas.

VI.

4.
Coal.

Coal has been discovered in several places in Assam. Several years ago a bed of it was wrought on the banks of a *nullah* called Suffry, a branch of the river Disung, and south-east of Rungpote. From the inferior quality of the coal and the difficulty of navigating the *nullah*, these works were after a time discontinued. Lieutenant Wilcox discovered coal on the banks of the river Booree-Dihing, believed to be approachable by boats. Coal has also very lately been discovered in the bed of a hill *nullah* that falls into the river Kullung. The exact position of the stratum is not yet defined, but it is supposed to be accessible by boats. These stray specimens though picked out of the boulders of the river are very tolerable, and lead to the conviction that the deeper strata are of much better quality.

5.
Lime.

Limestone forms part of the boulders of the branches of the Brahmaputra, above Suddia ; being washed down by floods from the mountains. It is found in flat roundish waterworn masses, seldom above a seer or two in weight, and is collected after the rains for sale—about 5000 maunds are gathered yearly.

A rich bed of shell lime, similar to that found in Syhet, has lately been found in the channel of a river called Nam-Bur, in the district of Morung, in Nowgong.

Large quantities of lime are made from fresh water shells collected from the lakes.

VI.
6.
Precious
Stones.

Munkung or Mogaum, in the country of the Burma Singphos, is celebrated for its precious stones. On a range of hills near it, a great number of deep mines are dug, and the working of them affords occupation for many thousand inhabitants. When a stone of moderate weight is found, it is hoisted to the mouth of the shaft by a windlass erected for the purpose. But the workmen frequently meet with large masses, which they have not the power of moving ; and these they contrive to break to pieces.

They begin by kindling a strong fire all over and around the precious stone, till it is well heated ; then they mark out with some strong liquid the piece they wish to break off ; a large stone is suspended from the top of the shaft perpendicularly over the piece to be broken off ; and when all is ready, the stone is cut away, and falling with greater impetus upon the mass below, breaks off the fragment exactly according to the line drawn with the liquid. It is difficult to account for this mysterious liquid being able to prevent the whole mass from being splintered, and how it should preserve such a line of separation ; yet such is the native belief, and it is not improbable that its effect is merely imaginary, or that it is practised from some superstition.

These stones are afterwards cut into convenient pieces by means of a bamboo bow with a string of twisted wire ; the string being applied

VI.

to the stone and used as a saw ; while its action is assisted by some sort of pulverized mineral, (probably corundum.) As might be expected, much bloodshed is frequently the consequence of finding these hidden treasures. When any doubt arises about the party who first discovered one ; or about the right of possession ; bloody battles ensue with short sword in hand between whole villages. Large stones are allowed to lie around the pits unclaimed by any one : no one venturing to carry them away, lest every one should fall upon him in vengeance. These precious stones are afterwards carried on mules to China, and are sold at very high prices. The Burmese Governor levies a tax of two seers on every 10 that are exported. These mules are driven along in gangs of 20 or 30, the drivers go armed with swords and matchlocks, and guide their beasts of burden by word of mouth. The route they pursue to China is via Catmow on the Irrawaddy. The overland journey from Mung-kung to Catmow occupies about nine days.

Besides the mines of precious stones, there are several amber mines in the province of Hukung, which are wrought with considerable advantage. The amber is cut into cylinders about $\frac{1}{4}$ inch in diameter, and two inches long, and is worn as an ornament stuck through a hole in the lobe of the ear, both by the Assamese and Burmese.

7.
Amber.

Brine springs, from which salt is made are not unfrequent in the Naga Hills. At Bore-

8.
Salt.

VI. hauth, in the possession of the Assam Rajah, about twenty of these wells are wrought by the Nagas, the inhabitants of the district. The brine they afford varies a good deal in strength, some wells producing ten sicca weight of salt to the seer of brine, while others produce only three or four. The manufacture is begun in November and continued till April. Being situated in a valley the wells are inundated during the rains. The process is carried on by filling the joints of large bamboos with the water of the wells, they are then suspended in an earthen trough or boiler containing water, a fire is applied to the boiler, the brine of the bamboos is evaporated and dry salt remains. It is remarkable that this salt is attended with so much cost in manufacturing that it is as expensive as the salt imported from Bengal.

9.
Petroleum.

Petroleum is found in small quantities in some parts of Upper Assam.

10.
Hot Springs.

There are several hot springs in the district of Nowgong between the river Dhunsiri and the Hills. Some of them are so hot as not to admit of the hand being immersed in them; the water of some is brackish; and of others savours of sulphurated hydrogen.

CHAPTER VII.

1, *Arts.* 2, *Trade.* 3,—*With Bengal,* 4,—*With Bootan.* 5,—*With Thibet.* 6,—*With China and Ava.* 7, *Temples.* 8, *Bridge.* 9, *Bund.* 10, *Fort.*

The Assamese are not a manufacturing people ; and with the exception of potters and copper-smiths, artizans of all kinds are obtained from other parts of India. Generally speaking every man, or rather every household, builds its own hut, grows its own opium and tobacco, scoops out its own canoe, weaves its own clothes, and plaits its own mats ; and from the rude manner in which these are done, but little credit redounds to the workman.

VII.

1.
Arts.

✓ They are equally ignorant of trade, and the whole commerce is engrossed by the Marwaris. These enterprizing men are stationed in all the principal parts of Assam, and their petty agents stroll about the frontiers wherever there is a chance of making a rupee—bartering salt and other necessaries, for lack, gold-dust, and ivory. These Marwaris must be serious rivals to any European engaging in trade, many such attempts have already failed to establish any profitable agency.

2.
Trade.

The following Tables, as stated in Captain Pemberton's Report on the Eastern Frontier, will

3.
With Bengal.

VII. shew the extent of the trade of Assam with Bengal :

Exports from Bengal in 1809.

Salt, 35,000 maunds, at $5\frac{1}{2}$ rupees,	1,92,500
Ghee, 1,000 maunds,	1,600
Fine Pulse,	800
Sugar,	1,000
Stone Beads,	2,000
Coral,	1,000
Jewels and Pearls,	5,000
Cutlery and Glass-Ware, (European),	500
Spices,	1,000
Paints,	500
Copper,	4,800
Red Lead,	1,000
English Woollens,	2,000
Tafetas,	2,000
Benares Khinkobs,	500
Satin,	1,000
Gold and Silver Cloth,	1,000
Shells,	100
Muslin,	10,000
	<hr/>
	2,28,300

Exports from Assam.

Stick Lac, 10,000 maunds,	35,000
Moonga Silk, 65 maunds,	11,350
Moonga Cloth, 75 maunds,	17,500
Munjeet, (Indian Madder,)	500
Black Pepper, 50 maunds,	500
Long Pepper, 50 maunds,	500
Cotton (with seed), 7,000 maunds,	35,000
Ivory,	6,000
Bell-metal Vessels,	1,500
Mustard Seed, 15,000 maunds,	20,000
Iron Hoes,	600
Slaves, 100,	2,000
Thaikol Fruit, 50 maunds,	150
	<hr/>
	1,30,900

TABLE 12.

Statement of Exports from Assam, and Export Duty levied at the Hydra Chowkey, in Lower Assam, from 26th December 1832 to 12th April 1835.

Description of Articles.	From 26th Dec. 1832 to 30th April 1833.			From 1st May 1833 to 30th April 1834.			From 1st May 1834 to 12th April 1835.		
	Quantity.	Value.	Amount of Duty.	Quantity.	Value.	Amount of Duty.	Quantity.	Value.	Amount of Duty.
	Mds. Srs. Chs.	Rs. As. Ps.	Rs. As. Ps.	Mds. Srs. Chs.	Rs. As. Ps.	Rs. As. Ps.	Mds. Srs. Chs.	Rs. As. Ps.	Rs. As. Ps.
Pepper,	0 0 0	0 0 0	0 0 0	0 11 8	2 8 0	0 4 7	0 0 0	0 0 0	0 0 0
Mustard Seed,	37,383 29 0	51,402 9 11	0 0 0	83,457 19 12	62,593 2 0	0 0 0	1,62,704 30 0	1,62,704 12 0	0 0 0
Rice,	404 30 0	328 13 9	0 0 0	1,481 35 0	1,302 14 0	0 0 0	5,897 20 0	4,423 2 0	0 0 0
Paddy,	40,536 30 0	15,201 4 6	0 0 0	17,586 10 0	6,594 13 6	0 0 0	8,995 20 0	3,373 5 0	0 0 0
Wax,	8 18 4	152 3 5	42 4 6	46 32 2	865 2 6	234 0 3	29 13 2	597 13 0	146 10 3
Long Pepper,	227 1 4	1,135 2 6	113 8 3	269 32 0	1,487 10 0	134 14 5	504 4 0	2,846 14 0	252 0 10
Munjeet, { Duty on weight,	267 39 10	1,339 15 3	133 15 11	1,957 17 2	13,885 5 0	978 11 5	2,042 26 0	12,598 20 0	1,021 5 3
{ Duty on value,	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	202 39 0	1,038 15 0	77 14 9
Elephants' { Duty on weight,	59 20 4	7,140 12 0	595 1 0	134 9 3	13,520 6 6	1,342 4 9	94 29 13	8,828 8 0	947 7 3
Teeth, { Duty on value,	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	51 36 0	5,325 6 6	399 6 5
Laha, without duty,	3,063 38 12	36,767 10 0	0 0 0	178 28 0	2,144 8 0	0 0 0	0 0 0	0 0 0	0 0 0
Do., duty on weight,	0 0 0	0 0 0	0 0 0	3,384 19 4	42,236 10 10	2,538 5 9	1,796 6 4	18,157 12 10	1,347 1 10
Do., do. on value,	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1,496 23 12	17,947 1 8	897 5 8
Moonga Thread,	69 34 10	13,973 2 0	0 0 0	291 4 0	58,220 0 0	0 0 0	224 21 10	53,889 12 0	0 0 0
Kapass, with duty,	3,726 29 10	16,769 3 4	1,863 3 11	1,193 30 0	5,885 11 6	596 14 0	0 0 0	0 0 0	0 0 0
Ditto, without duty,	0 0 0	0 0 0	0 0 0	7,349 8 8	33,071 6 0	0 0 0	6,967 19 14	3,382 12 9	0 0 0
Sundries, with duty,	0 0 0	2,047 5 3	204 11 9	0 0 0	6,642 15 10	664 4 9	0 0 0	8,182 0 1	818 3 2
Ditto, without duty,	0 0 0	513 12 0	0 0 0	0 0 0	913 11 0	0 0 0	0 0 0	889 0 0	0 0 0
Elephant, duty,	0 0 0	0 0 0	5,460 0 0	0 0 0	0 0 0	5,130 0 0	0 0 0	0 0 0	2,720 0 0
Betul,	0 0 0	0 0 0	8 6 5	0 0 0	0 0 0	493 9 11	0 0 0	0 0 0	381 9 4
Dry Fish,	0 0 0	0 0 0	48 0 0	0 0 0	0 0 0	86 0 0	0 0 0	0 0 0	98 0 0
Profit and Loss,	0 0 0	0 0 0	161 1 1	0 0 0	0 0 0	107 14 3	0 0 0	0 0 0	0 0 0
Fishery,	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	81 0 3	0 0 0	0 0 0	109 0 0
	0 0 0	1,46,771 13 11	8,630 4 10	0 0 0	2,49,366 12 8	12,388 4 1	0 0 0	3,04,186 6 10	9,216 0 9

VII.

4.
With Bootan.

In former times an extensive trade was carried on with Bootan. At Seelpotah, in the district of Durrung, a well frequented mart was once established. The Booteas brought down from their mountains gold-dust, rock-salt, musk, ponies, woollens, tails of the yak, and China silks, which they bartered for rice and dried fish ; but little of that traffic now exists.

5.
With Thibet.

There is but little trade now carried on with Thibet, and that little is chiefly effected by pilgrims. The few things imported are smoking pipes of Chinese manufacture, woollens, and rock salt. In exchange for these they give musk, ivory, and *Bisd* poison. Assamese captives at one time formed a considerable trade ; but since these latter came under the protection of the British, that lucrative branch has been exterminated. During the flourishing period of the Assam dynasty, we are informed, that the kings of Assam were in the habit of sending presents to the Grand Lama ; and that a caravan consisting of about 20 people annually resorted from Lassa to the Assam frontier ; and transacted merchandise to a very considerable amount with the Assamese. The Thibetans took up their quarters at a place called Chouna, two months journey from Lassa : and the Assamese, at Gegansur, a few miles distant from it. The trade of the former consisted of silver in bullion to nearly a lakh of rupees, and a large quantity of rock salt. This they exchanged with the Assamese for rice, silk, lac, and other produce of Bengal ; but this trade has for many years been discontinued.

VII.

The commerce between China and Ava, and Assam is of much consequence, and is every day increasing. The imports are nankins, silks, lacquered and China-ware, lead, copper, and above all things silver. I have already pointed out the line of communication.

6.
With China
and Ava, &c.

The tribes on the south of Assam all send something or another to the markets. The Munipuris cotton clothes of durable fabric and handsome patterns, the Kassyas iron hoes, and the Garrows cotton. ✓

The antiquities of Assam are either of a religious or warlike order, and are deserving of particular notice. Near Gohatti, on the summit of a high hill, stand the famous temples of Kamakya, one of the most celebrated places of pilgrimage in India. Thither pilgrims concentrate from all parts of Hindoostan, with confident hopes of their devotional requests being granted, when they might have sued at other altars in vain. The buildings themselves are very handsome structures, on a pretty extensive scale, and would stand a comparison with most second rate temples in the country. But these temples of the present day, composed of brick and mortar, seem only of modern date; and have undoubtedly been erected upon the ruins of a much more ancient set built of hewn and carved granite. These fine masses of masonry are not honoured with a situation in the more modern structures; but are degraded by being transformed into paving stones, steps of stairs, gutters and other subservient purposes. Even in that low state,

7.
Temples.

VII. evidences of their former grandeur still remain, and a carved moulding, a bass relief, a fragment of a flower, or a frustum of a column, proves their former pre-eminence. So very extensive have these antique buildings of Kamakya been, that the road up the hill, about a mile long and thirty feet broad, is paved from top to bottom with these granite ruins; a work itself of enormous labour and expence. On the rocks along the side of the road several Hindoo images as large as life, are sculptured; but their execution is rude and imperfect, betraying a degree of workmanship infinitely inferior to what may be seen on many of these despised paving stones. Granite ruins of the same nature are to be seen as low down the Brahmaputra as Doobri, about 20 or 30 miles beneath Gawalpara. Poorah, Rungpore, and Gheergong, are also celebrated for their ruins. On the hill of Gawalpara stand or rather are buried some very extensive buildings, but what purposes they have served seem undefined. No mortar has been used in cementing the bricks, but merely the red clay of the hill. It is remarkable that the bricks are quite different in size and shape from any in general use in India, and in all respects the same as those used in England. There are many bricks of a huge size amongst them, some of which may be a foot square and eight inches in thickness.

8.
Bridges.

Assam can boast of no less than two stone bridges, the remains of antiquity; viz. one over the Namdung river, and the other over a canal in Kamroop.

VII.

9.
Bunds.

One of the most splendid remnants in Assam is a bund road, or military causeway, extending along the whole northern border of the country from Suddia to Behar. It is called the Gohaing Koomla Ally, after the name of the Koomla Gohaing, by whom it was erected. This road is about fifteen feet broad and raised about eight feet above the inundation, and when in full repair afforded land conveyance at all seasons of the year. The blessing of such a road to such a country as Assam must have been invaluable. Unfortunately, it is now in many parts lost in jungle, and the rains have made regular breaches through it. There are several other bund roads of this nature, of which the next in point of importance is called the Bengal Ally. It passes through the district of Durrung from N. E. to S. W., and joins the Bramahputra nearly opposite Gohatti. It is believed to have been made by Meer Jumlah, the Mogul invader. One of his standing camps is still observable on the N. side of the road and is called the Bengal Ghur, and a village called Mongul Backa, once the residence of the Mogul General, still retains his name. The Bengal Ally is thought to have been connected with Gohatti by a bridge of some construction or another across the Brahmaputra; thus opening a free communication with the great bund roads.

The many extensive forts scattered over the country are well worthy attention, but too numerous to be introduced into a paper such as this. Those of Buddur Ghur, Rajah Ghur and

10.
Forts.

CHAPTER VIII.

- 1, *Seasons.* 2, *Storms.* 3, *Rains.* 4, *Inundation.*
5, *Earthquakes.*

VIII. Assam is quite uninfluenced by the changes of the monsoon ; the wind blows from east or north-east for more than nine months in the year, and seldom from any other direction for more than a few days at a time. At the commencement of the rains it more frequently blows from the west than at other seasons ; these westerly winds are always hotter and more unpleasant than the easterly, and are as unwelcome as the east winds in the Upper Provinces during the hot winds. There is a greater equality of temperature whether during the 24 hours or throughout the year, than is general throughout India. The hot weather is much more moderate and endurable ; there are no "hot winds," and a tattie is unknown. The nights are cool and refreshing, and a punkah is seldom put in motion. It must be allowed that the cold weather is not so cold and bracing as in Upper India. During November, December, January, and February, intense fogs prevail, impenetrable to the sun's rays till eleven and twelve o'clock. March, April, and even May are the most agreeable months in the year, and during that season, Assam has the advantage of most provinces. So cool and congenial is the temperature during April that warm clothing is then agreeable.

VIII.

2.
Storms.

Very violent storms are frequent during April, May, and June ; accompanied with tremendous thunder and lightning, and hail showers and torrents of rain. Though very awful and frequently very dangerous these tornadoes are grand and sublime in the extreme, and few phenomena of nature excite a stronger sensation, or gratify the observer with more majestic conceptions of the “ war of elements, the wreck of matter and the crash of worlds.” One afternoon at Goalpara while watching the progress of one of these typhoons, a tremendous thunder clap occurred, as if the electric discharge had taken place where I stood, and I felt as if enveloped with lightning. A few minutes after I heard that the house of a writer, about 150 yards from where I stood, had been struck. On going thither I found that the lightning had penetrated the thatch, descended along a post in the wall, and on reaching the floor had separated into two parts diverging in opposite directions. The mat walls were torn to pieces ; every thing in the house was turned upside down ; about a dozen yards of earth were ploughed up to a depth of three or four feet ; large stones were splintered ; and the fragments tossed several yards distant. The hole in the thatch presented the same appearance as if an 18-pound shot had entered, but without any trace of combustion. The writer was in the house while it was struck ; and further than being bespattered with mud, and pretty well frightened, received no injury whatever.

The rains set in very early in Assam, com-

VIII. they sooner over on that account but continue till the middle of October. Thus prolonging the rainy season to half the year. This long continuance of the rains, together with the heavy fog, renders the atmosphere extremely damp and salt, saltpetre and sugar melt and become liquid.

4.
Inundation.

The Brahmaputra begins to rise in April: about the 1st July, it is swollen to its full height and the whole country is an inland sea; the average rise of the river being about 30 feet. Whole herds of wild animals, no longer able to maintain their ground upon the islands where they had grazed during the dry season, then commit themselves to the tide, and swim stoutly for shelter to the neighbouring hills. It is astonishing how rapidly they do swim; and to what a distance: but animals of all kinds, domestic as well as wild, are demi amphibious in Assam. Yet with all their strength of sinew and agility many of them cross the boundless flood in vain; the inhabitants are constantly on the look out for such prizes; and with well armed canoes dash out into the stream, and spear them before they can get to the shore. Nor is their sport altogether unattended with danger—an elephant or a buffaloe is nearly as formidable in the water as out of it—even a deer or a hog is not to be run down with impunity; the boats are frequently upset, and sometimes fatal accidents ensue.

The rainy season may be called the carnival of Assam; all the labours of the field are suspended; every one seems happy and contented; and lives luxuriously upon haunches of venison,

or steaks of the hog or the buffaloe. The flood of Peucalion is in a great measure realized every year. The timid deer exhausted by long swimming and exertion, is glad to take shelter in a cow-house or a cottage. The tiger and the buffaloe swim together in amity, and the elephant and her young with the wild hog and her sucklings. The native anchors his boat to his own roof tree, performs his ablutions on his flooded hearth, and drags his net in his tobacco garden ; where the oxen lately ploughed, they are swum across to higher pasture ; where a field of grain a short time before waved in the rising sun, nought now waves but the muddy water ; the sites of large villages are known only by their roofs above the stream ; and the situations of others are pointed out only by a few palm trees weeping over the drowned and deserted foundations.

“*Jamque mare et tellus nullum discrimen habebant.*”

Earthquakes are of frequent occurrence in Assam, and few months pass over without one or more shocks being experienced. Between the 1st May 1834, and 1st May 1835, there were no less than twelve earthquakes, the most violent continuing about a minute. The following are the dates on which they occurred at Goalpara: 1st July, 3d August, 6th August, 30th September, 19th October, 21st October, 6th November, 8th January, 6th February, 11th February, 23d March, and 30th April. They all proceeded from west to east with a subterranean noise like a loud clap of thunder. These earthquakes produce the greatest alarm amongst the

5.
Earthquakes.

natives ; the moment one is heard every soul rushes out into the street, and a universal shout of terror is raised and continued till all is again quiet. Though very appalling, they seldom are accompanied with any serious damage. They occasionally make a rent in a brick wall, or throw down a piece of plaster, but seldom do more ; however there are exceptions to the contrary. About twenty years ago, the natives inhabiting a small knoll near the hill of Goalpara were so terrified by the unusual shaking of their little hill, that they fled from it for safety, and ran to a distance ; but when they returned, their houses and hill had disappeared, and a large pool of water five or six fathoms deep occupied its place. From all I have been able to learn this story seems perfectly correct. One of the oldest inhabitants died only three years ago ; the pool is still known by the catastrophe ; and makes one of the finest tanks in the place.

CHAPTER IX.

1, *Extent of Assam.* 2, *Divisions.* 3, *Zillahs.* 4, *Goalpara.* 5, *Station.* 6, *Public Building.* 7, *Town.* 8, *Bunds.* 9, *Suggested Improvements.* 10, *Chokey.* 11, *Provisions.* 12, *Conveyance to and from Gohatti.* 13, *Post.* 14, *Temperature and Rain.*

The extreme length of Assam from west to east may be estimated at 360 miles ; its breadth varies from 20 to 70 miles ; and taking 45 as the average, we will find an area of 16,200 square miles.

IX.

1.
Extent of As-
sam.

Assam is divided into three great divisions, viz. that occupied by our Government, that by the Rajah of Assam, and that by the dependent hill tribes. The marches between the British possessions and the Rajah of Assam, are the river Galloway on the north, and the river Dunseri on the south, both of which flow into the Brahmaputra ; the marches between the Rajah and the dependent hill tribes, are the river Dihong on the north, and the river Boori-dihing on the south. These two rivers also flow into the Brahmaputra.

2.
Divisions.

The British possessions are subdivided into Goalpara, late N. E. Rungpore ; Kamroop, or lower Assam or Gohatti ; northern central Assam, or Durrung or Tezpore ; southern central Assam, or Nowgong or Rungagora. To which may be added the small but separate district Nowdwar or Bishnauth.

3.
Zillahs.

IX. ^{4.} Goalpara. Goalpara is the lowest station in Assam, and though geographically speaking it belong to Bengal, yet from its being under the Commissioner of Assam, and being placed on the same footing as the other Zillahs, as well as from its possessing identically the same climate, I shall consider it under the same head.

The district of Goalpara is bounded on the south by the Garrow hills, on the west by Myensing, on the north by Rungpore and the petty states of Coochbehar and Bijnee, and on the east by Gohatti.

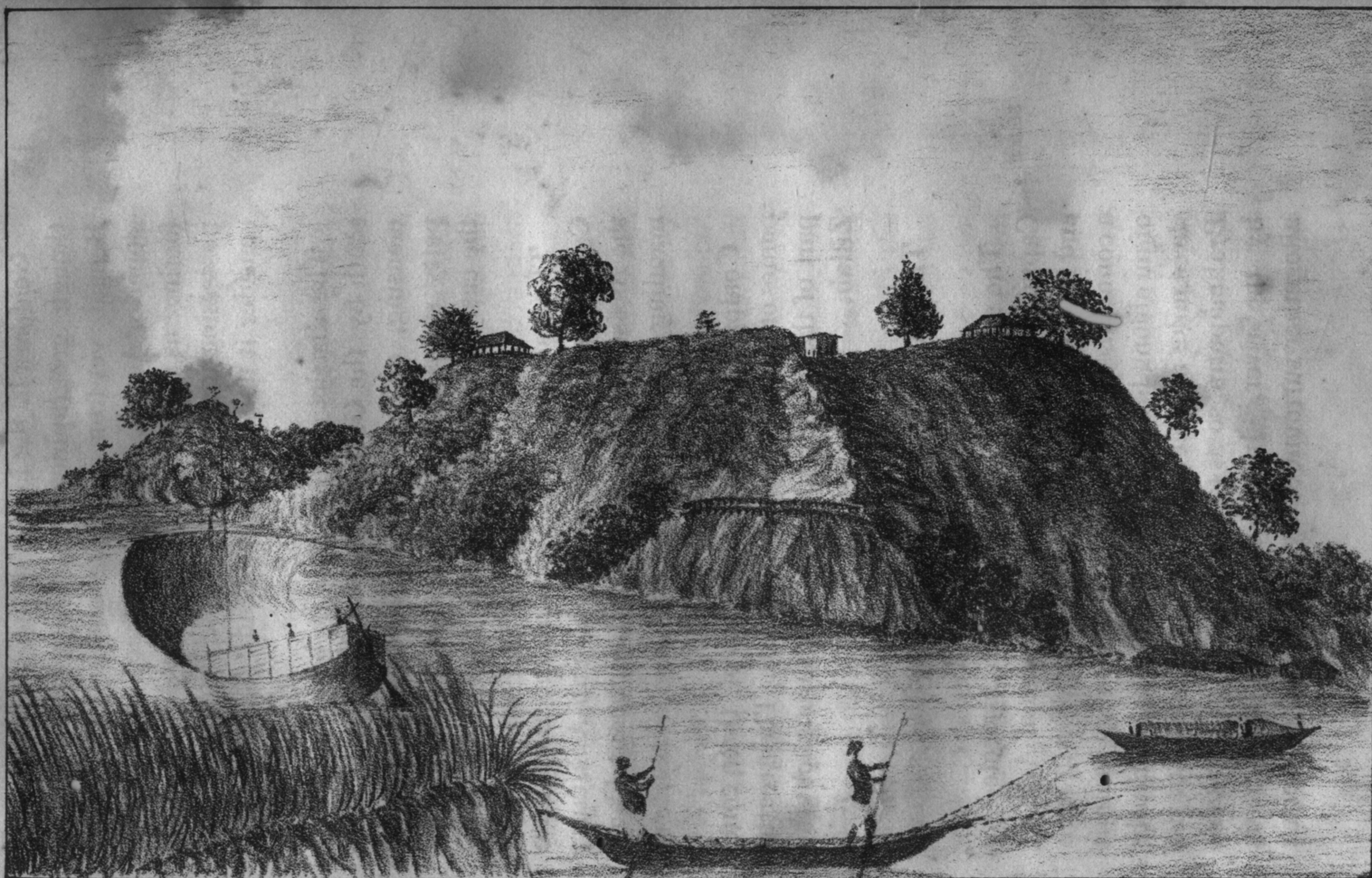
The residents of Goalpara are the Magistrate Capt. Davidson ; Mr. Strong, his Sub-Assistant ; the Assistant Surgeon ; and a Lieutenant Commanding the Sebundies.

Goalpara is the Head Quarters of three companies of the Assam Sebundy Corps. The greater part of the Seapoys are detached throughout the Zillah.

The prisoners vary from 250 to 350.

5.
Station.

The station of Goalpara was first selected by Captain Davidson, after the conquest of Assam ; and is as judiciously selected as could be in such a country. The houses stand on the very summit of an oblong hill, about 320 feet high, and nearly three miles in circumference, jutting out into the Brahmaputra, so as to be bounded on three sides by the river. Indeed during the rains it is altogether surrounded by water, and converted



J. McCosh Del^t et Lith^t

Goa para.

IX.

into a perfect island. The inundated state of the country is the less inconvenient, from the most picturesque roads having lately been cut all round the hill, about half way up, and nearly on the same level ; and its insular situation was also obviated by a strong bund having been thrown across a wide nulla, connecting it with the main land. The summit of one of the ridges is cut down and levelled ; affording a parade ground about an acre in extent, of an oblong square shape ; which adds very much to the comfort of the station, and is the usual place for recreation. The jutting position of the hill always secures for it the fresh breezes of the river ; and as the prevailing winds are either up or down the stream, and the reaches are several miles in extent, it is but little influenced by any febrile miasma. The height protects it against the intense fogs that brood during the night on the plains, which at daylight give the country beneath the appearance of being flooded by the river, and which do not ascend the hill till after sunrise. The hill is rich in copious springs of the finest water, but the natives give it no preference to that of the Brahmaputra.

The lines of the Seapoys run in a winding though horizontal manner along the bold eastern brow of the hill ; two terraces having been cut out of the solid clay for that purpose, and at very great labour ; for there is so little level land upon the hill, as to render cutting indispensable. This work, as well as the roads upon the hill, was performed by the prisoners ; and occupied them several months. The position is one of the most

6.
Public Buildings.

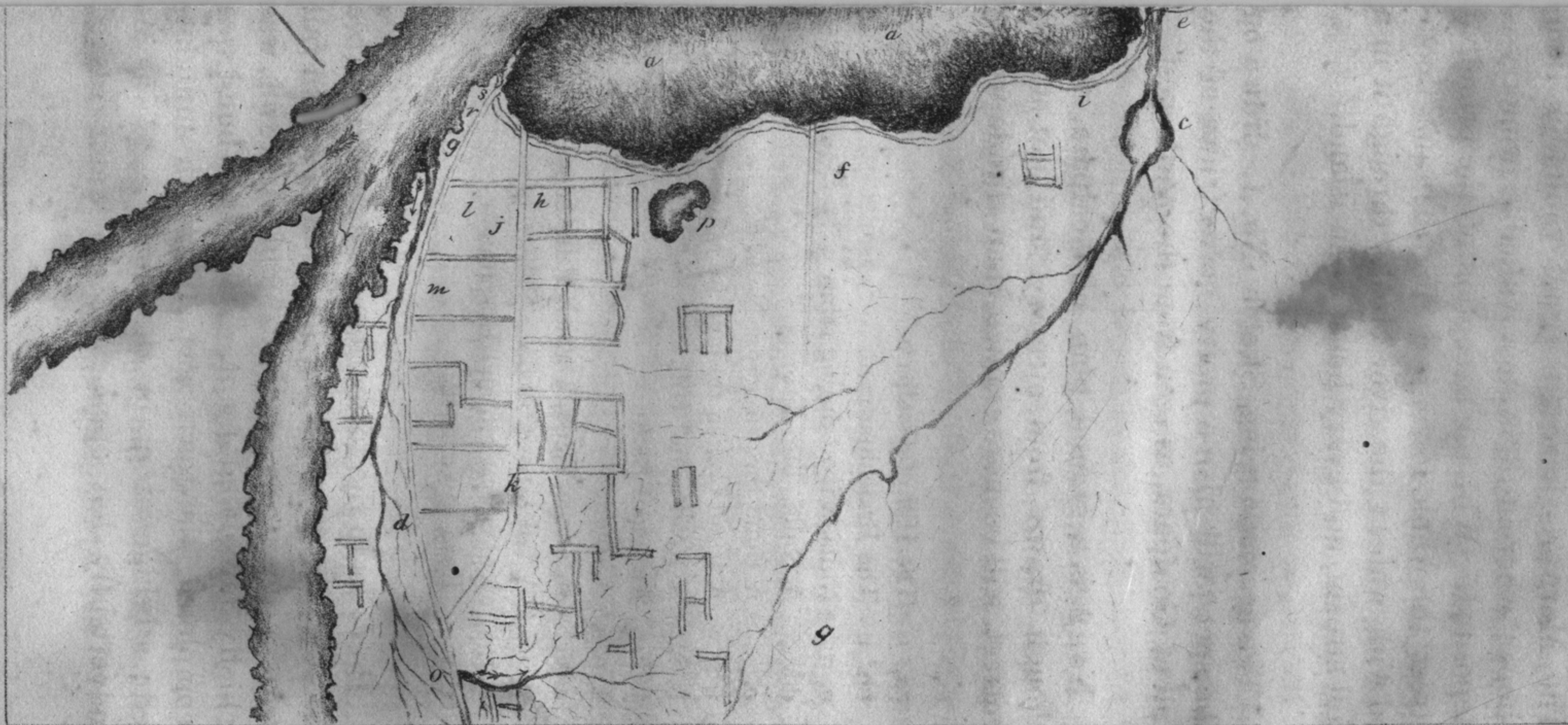
IX. healthy that could be desired ; and the Seapoys are well satisfied with it. There is a well of finest water at the very end of the lines, enough for the supply of the whole. The Seapoy hospital stands upon a small flat near the summit of the hill. The kutcherry, the jail and the jail hospital stand upon a rocky point of land at the foot of the hill, and are also judiciously situated. They are all of them built of the ordinary materials of the country ; mats and bamboos ; with a stockade of bamboos around the jail. The floors are planked ; and raised upon posts, about three feet from the ground ; affording free circulation underneath, and yet admitting of a man going under to sweep it. The best of all precautions is taken to prevent the accumulation of filth ; a bamboo grating is erected upon a rock in the river close to the jail gate, and the prisoners perform the calls of nature upon it. I wish the Seapoys could be prevailed on to adopt a similar plan for their wants. They are exceedingly filthy in their habits in this respect, and pollute a large portion of the hill.

7.
Town.

The town of Goalpara stands on a low plain to the westward of the hill. It is of very considerable extent, and has a population of more than five thousand. It has one long street of bazars such as is not to be seen in any other part of Assam, and almost every thing in native use is procurable. The merchants are chiefly Marwaris, as I have elsewhere stated.

The town is almost entirely built of grass, mats and bamboos ; and is frequently burnt down.





J. M. Cosh del. & Lith.

Plan of Goalpara from Memory

Printed by I. Blay, Asiatic Lith. Press, Calcutta



The Marwaris have fire-proof vaults in their shops; wherein their most valuable property is deposited. With the exception of the principal street the whole town is during the rains flooded with water; the river breaks through it in a full stream, and every house is an island.

The accompanying Sketch No. 1, drawn on the spot, will give a pretty correct idea of the hill of Goalpara, as seen from the north west.

No. 2 is a ground plan of Goalpara, which though drawn from memory, and not strictly correct, will be more explicit than simple words.

- aa. The Hill of Goalpara.
- bb. The Bramahputra.
- c. Nulla, a river during rains.
- dd. A Nulla, ditto ditto.
- e. A Bund thrown across Nulla c.
- f. g. A Bund broken through by rains.
- h. i. A Road round Hill.
- j. k. Principal Bazar.
- l. m. o. A Bund.
- o. A Sluice, through which water runs.
- p. A Lake, never dry.
- q. r. s. Kutchery, Jail, and Hospital.
- t. v. Road to Gohatti.

Previous to the formation of the bund e. (see Sketch) the river during the rains flowed in full torrent down the nulla c., and the town was chiefly inundated by it. After this bund was completed, the town was still much inundated; a bridge at o. in the bund o. z. was inadvertently left open, and the water rushed

IX. through it and inundated the town up to the very bund c.: so that the level of the water on the town side was only eighteen inches lower than that of the river side of the bund. On my leaving Goalpara, I believe it was the intention of the Magistrate to shut up this sluice; by doing which, I have no doubt the town would have been comparatively dry, while the rain water might have been drained off by a canal entering the river a mile or more below the town. The bund at c. was begun in the middle of February, 1835, and occupied the whole of the disposable prisoners till the middle of June. The greater part of it was made by carrying the red clay soil from the hill. The river began to rise when about 30 or 40 feet was required to complete it; there was no hope of having time to finish it from the soil of the hill, then become so distant, and therefore the alluvial soil nearest the gap was used. This portion became saturated with water as the river rose, and constant repairs were during the rains necessary to keep it entire, and its head above water. It has since been made as stout as any other portion of the bund. The whole length of the bund, as near as I remember, is 150 or 200 yards. It is in form of a segment of a circle, with the convexity towards the river. It is about eight feet broad at top with a base of equal proportions. I have been so particular about this bund, because, I am convinced, it will add in a very great degree to the health and comfort of the inhabitants of Goalpara.

9. If I were to add any suggestions towards the improvement in the healthiness of Goalpara,

IX.

I would recommend that a marsh or jeel marked v. in the chart, be either drained, or converted into a tank. This is the principal reservoir for all the water from the springs on the hill ; it is, in fact, a perfect marsh, and must be a great source of disease. I would next suggest, that the hill be kept free from jungle. When I went first to Goalpara elephants and tigers might have harboured on it, and, indeed, sometimes they have been known to do so ; while the roads round it were being made the jungle was all cut down, but it grows again so rapidly as in a year or two to become impenetrable. I would further recommend that the road h. i. along the foot of the hill be raised two or three feet, making use of the red clay of the hill for that purpose.

Previous to 1835 a Custom-House was established at Goalpara and a duty levied upon all articles of trade, but in March of that year the duty was abolished. This was called the Hydra or the Assam Chokey. I believe all the other chokeys of the same nature were abolished at the same time.

10.
Chokey.

With the exception of ghee, coarse rice and flour, and such articles, there is nothing procurable in the bazars for European use. This remark is applicable to all the stations in Assam, and the residents are under the necessity of ordering almost every thing from Calcutta. Once or twice a year a wandering Jew brings up a

11.
Provisions.

IX. boat load of sundries, and makes a ready sale of them. Ducks and fowls are often not easily procured, and some officers employ a man to go out to the jungles for game, and by doing so can keep a good table. Most residents keep a farm-yard of their own, but in that they are often disappointed, for the goats and cows do not give milk enough ; the fowls give but few eggs, the hawks kill the chickens, and the ferrets rob the poultry-yard ; (so at least the servants say) and short commons is not an unusual complaint.

12.
Conveyance
to and from
Gohatti.

There is a sort of road between Goalpara and Gohatti passable on horseback, but only in the dry weather : for six months in the year, the only means of conveyance is by water. In the dry season boats in general navigate the main branch of the Brahmaputra, but during the rains it is very rapid and unmanageable, and the voyage is performed by a series of nullahs many miles inland, and to the north of the great river. Large boats require six or eight days to go from Goalpara to Gohatti.

13.
Post.

During all seasons of the year the post is conveyed by boats : little canoes rowed by only two men. These are relieved every fifteen or twenty miles. The Calcutta dawk takes about a week to reach Goalpara, ten days to Gohatti, thirteen days to Bishnauth, and many days more to Suddia. The rate down the stream is about half that time.

The following Table shews the result of one year's observation at Goalpara :

IX.

14.
Temperature
and Rain.

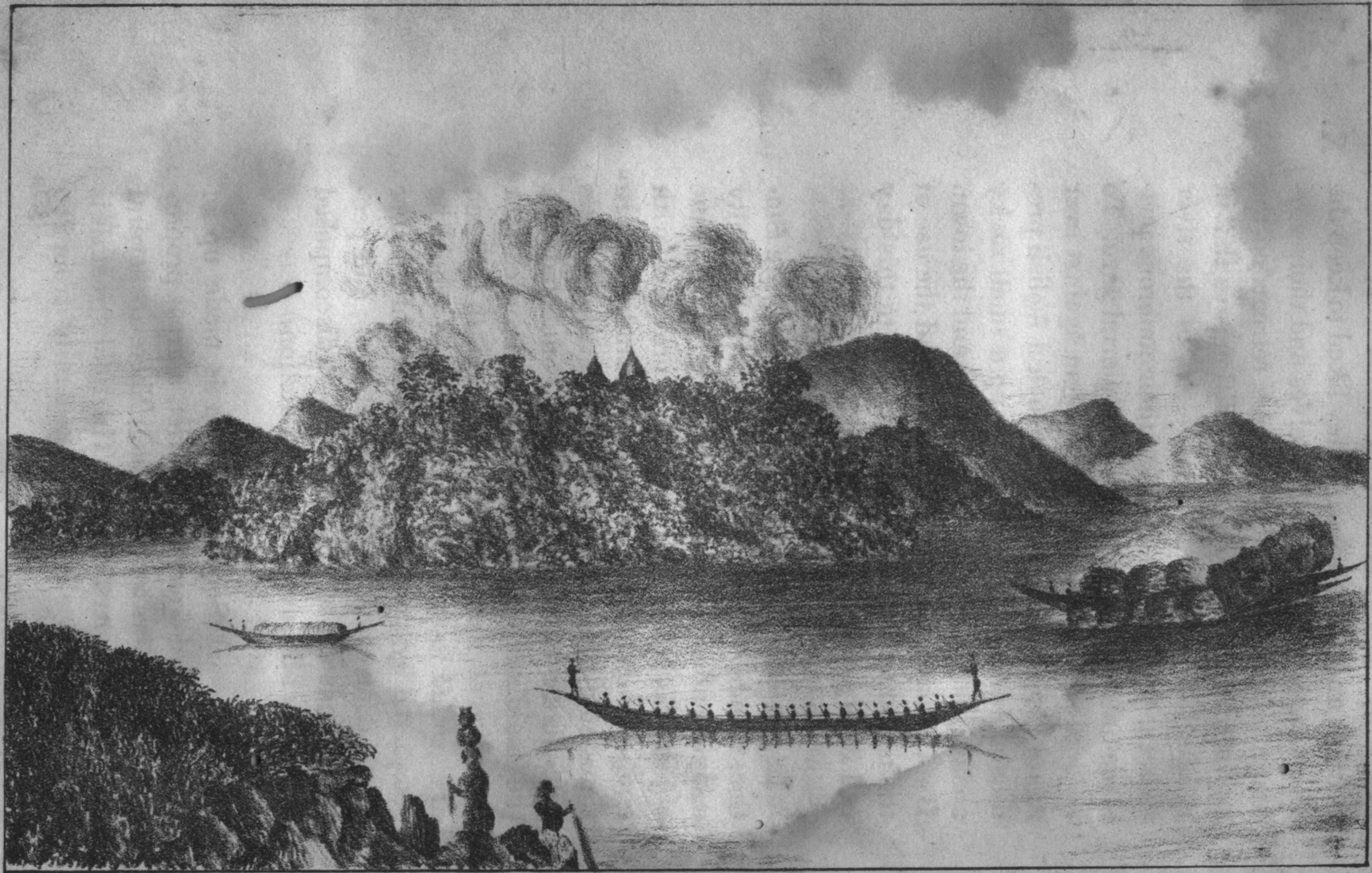
1834—35.	Temperature.				
Months.	Minimum 6 A. M.	Maximum Noon.	Average 6 A. M.	Average Noon.	Days of Rain.
May, ..	70	87	76	81	16
June, ...	76	87	79	81	23
July, ...	78	84	81	82	21
August, ...	80	89	82	85	16
September,	77	86	80	82	18
October, ..	74	83	77	79	7
• November,	63	76	69	73	1
December,	61	71	65	67	3
January, ..	58	66	60	63	3
February, .	60	73	62	68	4
March, ..	63	88	68	79	1
April, ..	66	88	72	79	13
					126

CHAPTER X.

1, *Kamroop*. 2, *Arparbut*. 3, *Umanunda*. 4, *Assam Sebundy Corps*. 5, *Gohatti*. 6, *Ancient Splendour*. 7, *Aghorpunts*. 8, *Vestals*. 9, *Unhealthiness*. 10, *Causes of*. 11, *Jail and Hospital*. 12, *Improvements*. 13, *Probable change of Station*. 14, *Pay of Medical Officers*.

X. 1. **Kamroop.** Kamroop, or Lower Assam, or Gohatti, is bounded on the west by Goalpara ; on the north by Bootan ; on the south by the Kassya hills ; on the east (north of the Brahmaputra) by Durrung ; and (south of the Brahmaputra) Nowgong. Gohatti may be considered the head station of Assam ; it is the residence of the Commissioner and Agent to Governor General Captain Jenkins ; it is the Head Quarters of the Assam Sebundy Corps, Commanded by Captain Simonds, and Staff, Lieutenant Mathews. The Judicial and Revenue Department is managed by Captain Bogle and his Assistant Lieutenant Vetch ; only one Assistant Surgeon is allowed for the double duties of the Station.

2. **Arparbut.** Kamroop, as its name implies, was in ancient times a sort of Idalian grove,—a privileged region for mirth and dance and revelry, and all manner of licentiousness ; and according to Assamese mythology, even the gods themselves condescended to set them example. Gohatti was believed to be a favoured abode of the Hindoo



T. McCarty Lith. Cal.

DL

Printed by T. Black Asiatic Lith. Press Cal.

deities ; and yet it appears they liked to keep the **X.**
 Brahmaputra between themselves and their wor-
 shippers, and had their secret retreat on the
 opposite side of the river. Tradition says that in
 coming down gods and goddesses, to the river
 to bathe one warm morning, their amorous pas-
 sions unluckily exposed them to mortal gaze. To
 hide their shame, and secure them against ever
 again exposing themselves in such a foolish pre-
 dicament, they instantly threw up a small rocky
 island, between their bathing place and the town.
 But the natives seemed to understand the use of
 the island as well as themselves, and to this day
 call it *Arparbut*.

In the centre of the river opposite the Sta-
 tion, stands another little rocky island equally
 sacred called Umanunda, a very picturesque
 object clothed with trees and crowned with
 temples. It also is the subject of tradition. In
 times long past, and when there was very little
 probability of this island being connected with
 the mainland, a prophecy was recorded that
 whenever it were possible for man to walk on
 dry ground to the Umanunda, Assam would be
 conquered by the Chinese. In the cold weather
 this is done every day, upon the sand ; and peo-
 ple's minds are at times somewhat discomposed
 about the fulfilment of the prediction.

3.
 Umanunda.

The Assam Sebundy Corps is made up of
 men recruited from the district, a great propor-
 tion are Garrows and Rabbas. There are several
 Goorkahs amongst them. The total strength is
 about 750 men. There are generally from 200

4.
 Assam Sebun-
 dy Corps.

X. to 300 Seapoys, including recruits, at the Station of Gohatti.

The average number of prisoners is about 500.

5.
Gohatti.

Gohatti stands on the left bank of the Brahmaputra, on a plain elevated a few feet above the reach of the floods ; the land gradually lowers as it retires from the river, till it becomes fit for rice cultivation, or sinks into *jeels* and marshes. This plain is bounded on the interior by a chain of pretty hills, stretching from N. E. to S. W. in form of a semi-circle ; with its two promontories resting upon the river, while the river itself taking a bend concentric with the hills, cuts it out in the form of a crescent. In the belly of this crescent, and nearly at equal distances from its two horns, the town and station are situated. The town is of a very straggling irregular form, and almost every house is built of mats and bamboos. Some of the houses of the Residents are built of brick and mortar, and others originally built upon trees sunk into the ground, have had walls of brick and mortar built under the roofs. Three of the houses stand upon a high bank overlooking the river.

6.
Ancient Splendour.

During the splendour of the Assam dynasty, Gohatti was one of the largest cities in the kingdom ; its fortifications constituted the security of the State from the incursions of the Moslems, and its Government was committed only to the sons of royalty. A small portion of its former extent and grandeur now remains ; its brick, its mortar and earthen-ware constitute a



J. McCosh del. et lith.

X.

large proportion of the soil; its numerous spacious tanks, the works of tens of thousands, the pride of its princes, and the wonder of the present day, are now choked up with weeds and jungle, or altogether effaced by a false though luxuriant soil that floats on the stagnant water concealed beneath; the remains of extensive fortifications may still be traced for miles in its mounds and ditches; the gateways of some are still standing; and the guns of others still lying upon the ramparts. Almost every hill around Gohatti is crowned with one or two little temples, all still well endowed, and in good repair; and inhabited by all the ministers and mercenaries of Hindoo religion. In the *Zillah* of Kamroop there are no less than 37 temples, all endowed.

These temples are prolific in Faqueers and other vagrants who stroll about the country in the most disgusting state of filth and nakedness. Aghorpunts, or eaters of dead men's flesh, are occasionally met with amongst them; during my residence at Goalpara two men of that caste were caught gnawing the flesh from a human bone, and taken up by the Police. They were sent to me by the Magistrate to have my opinion as to their sanity. One of them was not exactly *compos mentis*, but the other was of sound mind, and told me he had been in the habit of eating human flesh for many years. It was once the custom with these carion cannibals to walk about the bazars picking a putrid thigh bone, with the object of extorting money from the inhabitants, who preferred paying them a few pice to get rid of the annoyance;

7.
Aghorpunt.

X. and it was even considered justifiable to shoot them like wild beasts whenever they were found. One of the above men came from Beauliah, and was on a pilgrimage to Gohatti. The other was an Assamese, a barber.

8.
Vestals.

There is a temple at Haju in Kamroop, famous for a large number of vestal virgins being maintained in it, in honour of the god, whose duty it is to dance and sing once or twice a week and perform other parts of devotion. There are only two such establishments in Assam.

9.
Unhealthiness.

From my short residence in Gohatti, I am unable to speak from much personal experience of its climate ; but if I am to judge from the reports of the natives themselves, it is the most unhealthy station in Assam : indeed the records of the Hospital for many years past, exhibit a rate of mortality surpassed by few stations in India.

10.
Causes of.

Few positions could be worse chosen in so far as health was likely to be concerned ; true it stands upon the banks of a noble river, but this is comparatively of little advantage as the prevailing wind is obstructed by a high range of hills ; and the fitful breeze that ventilates it, instead of being purified by a long passage along the water, blows direct from the jungles, impregnated with whatever unhealthy miasmata it may meet with. Another cause of unhealthiness ; is the proximity of dense wooded marshy jungle, and the multitude of old tanks throughout the station, perfect quagmires

X.

and marshes ; the very hot beds of disease. From the great depth of the tanks, there is no possibility of draining them ; and from their number and enormous extent, the expence of clearing them of floating-jungle would be a work of immense expence and labour. The best practical remedy I could suggest to do away with such a source of unhealthiness, would be to encourage the growth of floating soil all over the surface, and keep it closely cropped so as to prevent the generation of malaria. We are aware that the natives of Cashmere convert the surface of their lakes to a useful purpose by first covering them with mats ; afterwards strewing them with a stratum of earth, which becomes a permanent floating soil, and sowing them with the seeds of some congenial vegetable. I am of opinion that if the surface of all the pestilential tanks of Gohatti were so dealt with, and the vegetation kept within proper bounds by frequent cutting, that they might be converted to a beneficial purpose, besides being disarmed of much of their pestilential qualities.

The jail is placed close upon the river, and is as well situated as the station admits of. It is built of mats and bamboos, and on the same plan as the jail of Goalpara. The hospital stands about a mile from the jail, and has hitherto been built of the same materials, but a very capacious and superior one with brick walls and floor is now being erected, and on as good a site as could be found.

11.
Jail
and
Hospital.

X. A great deal has already been done by the
 12. Civil authorities to obviate the sickness of Go-
 Improvement. hatti ; much jungle has been cut down, many
 tanks have been cleared out, the sloughs through-
 out the station have been drained, new roads
 and bridges have been formed, and cultivation
 in the immediate neighbourhood has been libe-
 rally encouraged ; but very much still remains
 to be accomplished, which, with the present re-
 sources of the station, must necessarily, or at least
 for a series of years, remain so, and when all has
 been done that art can do, I am inclined to
 think that Gohatti, from its unfortunate locali-
 ty, never can be made so healthy as many other
 positions in Assam are capable of becoming.

Possibly a time may come when it shall be
 considered expedient to abandon the present sta-
 tion and remove to another. In the event of
 such a resolution, I believe that a very judicious
 place might be selected on the right bank of the
 river, directly opposite to the town of Gohatti.
 There is abundance of high land above the reach
 of the inundation ; so far as malaria is concern-
 ed the position would be as little affected by it
 as any place in the country. The great obsta-
 cle to a removal of the Head Quarters, would
 be the sacrifice of property both public and pri-
 vate ; and yet there are many examples extant
 in India of such changes being thought advis-
 able, though made at far greater expence than
 would be incurred at Gohatti. Most of the
 public buildings there are of the cheapest and
 most perishable construction, requiring constant

repairs, and to be built anew every seven or eight years. The present buildings will before long require to be rebuilt, and could be erected on a new site nearly at the same price as upon their old foundations. The only difficulty to be got over would be the property in houses of the public Officers, which, as they now stand, might be valued at not more than 12,000 rupees. X.

Only one Assistant Surgeon, with the help of an Apothecary, and four or five Native Doctors, is allowed for the double duties of Gohatti. The Civil charge is of itself unusually heavy, yet he is called on to perform the duties of the Sebundy Corps besides. Several cantonments in Bengal, with such double establishments, and with a much more healthy climate than Gohatti, have two Medical Officers ; one attached to the Regiment, and one in Civil charge. If I might venture on an opinion, it would be that such an arrangement would be very proper at Gohatti. This would always provide for any accident befalling any other Medical Officer, for on any emergency one of the two would be disposable ; and would obviate the great inconvenience that has of late been experienced, of Sudder Stations remaining for a considerable time without Medical attendance.

13.
Charge of Station possible.

The Medical Officer at Gohatti has always been placed in an anomalous footing as to pay and allowances. At present, while attached to the Civil station, he has only 350 rupees of Civil pay, and about 40 or 50 of head money for the Sebundies ; in all never more than 400 rupees a month ; whereas, were he attached to the Regi-

14.
Pay of Medical Officers.

- X. ment and ordered to perform the Civil duties, he would have 420 of Regimental pay, and 100 Rupees for Civil charge, in all about 520 Rupees ; and yet the duties in both circumstances would be the same. I believe this latter arrangement prevails at some such stations in Bengal ; and such, if extended to Gohatti, would have its due weight in reconciling Medical Officers to remain there.

In no part of India is the inferiority of pay of the Medical Officer so much felt as in Assam. The other Officers in Civil charge are well paid, none having less than 500, and most of them 1000 a month or more, while the Assistant Surgeon is limited to 350. I have often thought that their pay might be conveniently increased by a *Sudder Ameenship*, and their time and talent be made much more serviceable to the State. At present, unless upon emergencies, not one-third part of their time is occupied upon professional affairs ; and unless they can draw largely upon their own personal resources, time hangs heavy upon their hands, and they would be glad to be in any way employed gratuitously, to get rid of *ennui*.

CHAPTER XI.

1, *Durrung.* 2, *Tezpore.* 3, *Nowgong.* 4, *Runga-
gora.* 5, *Now-dwar.* 6, *Bishnauth.* 7, *Prison Dis-
cipline of Assam generally.*

Northern Central Assam, or Durrung, or Tez-
pore, lies entirely on the north-side of the Brah-
maputra. It is separated from Kamroop on
the west by the Bur Nuddi, which flows into the
Brahmaputra nearly opposite Gohatti; and from
Now-dwar on the east by the river Burili. On
the north it is bounded by Bootan and the coun-
try of the Akas Koppachors and Duphlas, and
on the south by the Brahmaputra. It is divid-
ed into four districts, viz. Durrung, Chootiya,
Chardwar and Chatgari, the three first lie along
the river, the last lies inland and north of Dur-
rung.

The Sudder Station was formerly at Durrung;
but from the position not being central, from
being situated in a low country liable to inunda-
tion and great sickness, as well as from the
encroachments of the Brahmaputra threatening
to sweep the Station entirely away, the Head
Quarters were in 1835 removed to Tezpore,
much farther up the river.

Tezpore is situated on a high plain close
upon the Brahmaputra and extending a consi-
derable way inland. It is far above the reach

XI.

1.
Durrung.2.
Tezpore.

XI. of the floods and fit for the cultivation of wheat and dry grain of all kinds. There are many remarkable ruins near Tezpore, a full account of which has been given by Captain Westmacott in the Journal of the Asiatic Society for April 1835. The Civil duties of Tezpore are performed by Captain Matthie and his Assistant Lieutenant Tucker. No Medical Officer is attached to the Station. There is one Apothecary appointed to it in conjunction with Nowgong. The Medical Returns are made by the Assistant Surgeon of the Assam Infantry.

3.
Nowgong.

Southern central Assam, or Nowgong, or Rungagora, extends from Jagee chokey on the Kullung river, on the west to the river Dhunseri on the east; is bounded on the north by the Brahmaputra, and on the south by Cachar and Jyntea. The Kullung is but a small river, an arm of the Brahmaputra that branches off nearly opposite Bishnauth, and making a sweep towards the south and west, joins the great river again about 12 miles above Gohatti. Throughout the year it is navigable from Rungagora downwards, but during the dry season it is shut up above that station.

4.
Rungagora.

The Sudder Station was formerly at Nowgong, but it was removed in 1834. Nowgong was objectionable from being situated in the midst of a bazar, and liable to inundation, Rungagora has the advantage of a rising ground, and being above the floods. It stands on the banks of the Kullung. The Civil duties are at present performed by Ensign Brodie. There is no Medical

Officer attached; the Hospital Returns are made from Bishnauth. XI.

Now-dwar or Bishnauth is one of the smallest districts in Assam, it extends on both sides of the Brahmaputra, on the north from the river Burili to the river Galloway, on the south from Koliabar hill to the Dhunsiri.

5.
Now-dwar.

Bishnauth is situated in the centre of the division, on one of the high plains peculiar to Assam, and on the right bank of the Brahmaputra. It is the Head Quarters of the Assam Light Infantry, commanded by the Political Agent, Major White, who also administers the Civil affairs of the District; the other Officers are Lieutenant Bigge, Adjutant, the Assistant Surgeon Mr. McLeod, and several other Officers doing duty.

6.
Bishnauth.

I have declined going further into particulars respecting the Stations of Tezpore, Rungagora, and Bishnauth, than was necessary to embrace them generally in a topography of Assam. They are the province of Mr. Assistant Surgeon McLeod, who, I have no doubt, will enter fully into all the peculiarities of their climate and seasons. Probably the time is not far distant, when the Stations of Rungagora and Tezpore shall form one separate Medical Charge. They are gradually rising into importance, and may soon require such an establishment.

When a culprit is accused of any crime, he is confined in a jail apart from the convicts till his

7.
Prison Discipline of Assam generally.

XI. cause is brought forward. On being sentenced to so many months or years of imprisonment, he is put in irons heavier or lighter according to the crime, and lodged with the great body of convicts in the criminal jail. The prisoners after their morning meal, are between seven and eight conducted to some public work, most commonly roads or bunds, where they continue to labour till four or five in the evening. They then return to the jail, cook their evening meal, and before dark are shut up for the night. Each is allowed to provide his own provisions. A few pice, three I believe, is allowed to each for subsistence ; this they expend in rice and other condiments as suits their taste, from petty merchants in the jail bazar. Those in good health find this limited pittance sufficient, and some even save money, and lend it out on usury. I am inclined to think, this plan of allowing prisoners so many cowries a day to be expended as each thinks proper is much preferable to that of serving out rations. Where rations are served out on a large scale, the contractors are apt to give an inferior article, or in some way or other to defraud the poor prisoners ; and even in the event of fair play, which is but seldom met with, the prisoners are liable to be jealous and dissatisfied ; but, when they have got the cowries in their own hands, each finds an interest in its consumption ; competition in the bazars ensures him the choice of a good article ; the idea of being his own purveyor has a moral effect upon his constitution that is of much consequence towards a healthful state of body ; and if he is contented with a slender meal, or lives within his allowance, he knows he alone

profits by it. I should be somewhat doubtful XI.
how far the prison discipline of the present day
is in all cases adequate to the ends of justice.
Many of the prisoners lead rather a happy life,
and consider themselves as Company's servants.
They take as much pains to burnish their irons
as they would a bracelet, and would not choose
to escape though they had an opportunity.

CHAPTER XII.

- 1, *Salubrity.* 2, *Malaria.* 3, *Properties of.* 4, *Sources of—Marshes.* 5, *Rice Fields.* 6, *Tanks and Pools.* 7, *Jungle.* 8, *Neglect of Ventilation.* 9, *Ruined Houses.* 10, *Predisponent Causes of Fever.* 11, *Depressing Passions.* 12, *Low Diet.* 13, *Putrid Fish.* 14, *Substitute for Salt.* 15, *Impure Water.* 16, *Bathing.* 17, *Exposing Sick on river side.* 18, *Deficiency of Clothing.* 19, *Prevalent Diseases.* 20, *Cholera.* 21, *Scurvy.* 22, *Sanatorium on Bootan Mountains.* 23, *Comparative sickness of Gohatti and Goalpara.* 24, *Comparative healthiness of N. E. Frontier.*

XII.

1.
Salubrity.

I come now to the salubrity of Assam generally, and, as a strong prejudice, has long existed against it, and some Offices have carried this feeling so far as to exact a higher rate of premium on the insurance of lives in that province, I shall endeavour to shew on what grounds they do so. It ought not to be forgotten, that all new countries in India, when first taken possession of by the British, have been found unhealthy; nor have they ceased to be otherwise, till a settled state of the country allowed them to abandon these sinks of human life, the possession of which, in time of war, was of the greatest importance; till too often dearly-bought experience enabled them to select stations more congenial to European constitutions; till the new cantonments were cleared of their native pestilential jungle, the swamps drained, and comfortable houses erected. That this was frequently the case on our taking possession of Assam, the

tombs unhonoured, “unlettered and unknown,” of many brave Officers in places long since deserted by Europeans afford melancholy proof. Thus Assam was saddled with a name, which even to this day clings to it. It will, no doubt, be urged, that the mortality of recent years, justifies its original character, and the lamented names of Scott, Neufville, Beddingfield, Burlton, Beadon, Leslie, Brodie and Cathcart, will be adduced as evidence incontrovertible. But so far as climate is concerned these casualties might have happened in most parts of India. Mr. Scott died of chronic disease of the heart; Captain Neufville of gout of the stomach; Doctor Leslie died of jungle fever, brought on by a two days’ exposure in the jungles at a dangerous season in preparing the skins of two rhinoceroses; Lieutenants Beddingfield and Burlton were massacred by the Kassyas; Doctor Beadon was shot by an arrow, when too eagerly endeavouring to revenge his murdered friends; Lieutenant Brodie died of fever, caught in scouring the jungles at a season of the year when no European ought to be exposed, and without European aid of any kind; and Captain Cathcart of jungle fever, induced by being exposed to a whole day’s rain, and being obliged to spend the night without any of the comforts of life.

So much depends upon the selection of a station, that one side of the river may be particularly unhealthy, while the other is the very reverse. At Jogigopa a considerable detachment was at one time posted: but it proved eminently

XII. unhealthy; and though frequently relieved, generally left one or two Officers behind. Yet, on the opposite side of the river is the station of Goalpara, perhaps the healthiest in Assam. That all the stations of Assam are as well situated as they might be, I will not affirm; but I am convinced that, with a proper attention to the nature of the country, to the reaches of the river, and the prevailing winds, as healthy stations may be selected in Assam as in any part of Bengal proper.

2.
Malaria.

I am of opinion that intermittent fever, and far the greater portion of other fevers and other diseases prevalent in Assam, are the consequence of miasma or malaria, generated in the decomposition of vegetable matter. Indeed, no fact is better ascertained, or receives more general assent than that a certain quality, whether a gas or a vapour, or a film or an impalpable powder is evolved by vegetable matter while exposed to heat and moisture, and undergoing the process of putrefaction, which has the property of engendering fever when brought in contact with the body.

3.
Properties of.

This miasma is generated in greater quantity in autumn and spring than during other seasons of the year; is more potent at full and new moon than at other periods; and more active between sunset and ten o'clock, than during the rest of the day. Miasma seems to possess gravity, for people that sleep on the ground-floor are more frequently attacked with fever than those who live in the upper stories; and, as I have been

informed by my esteemed friend Doctor Strong, XII.
who has long made malaria his study, that some European cultivators preserve their health in the Sunderbunds, merely by living in lofty houses; whereas, if they slept on the lower story they would suffer very severely, or die of fever.

Miasma is capable of being dissipated by heat; a moist atmosphere is more favourable for its action than a dry one; and a person may sleep in a marsh with comparative impunity if he sleeps beside a watch-fire. Miasma is actuated by the same laws that actuate the atmosphere, and may be conveyed by the wind to a considerable distance with its properties unimpaired.

A ship may anchor a mile distant to windward of a marshy island with impunity; but if she anchors at the same distance to leeward, she will, in all likelihood, be attacked with disease. An army may encamp with impunity on the sea shore of a pestilential island during one monsoon, and while the wind is from the sea; but if the monsoon change, and the wind from the interior blow over the camp they are certain of being attacked. Miasma loses its property of producing fever in its progress on the wind, as if it became too much diluted to take effect; and a town may be situated five or six miles to leeward of a marsh and not be subject to fever; whereas, if situated within one mile, it may have many.

People constantly exposed to malaria become innured to it, and enjoy comparatively good

XII. health, where a newcomer would suffer. The Garrows, one of the hill tribes of Assam, are the most powerful, athletic race of men I have seen in India ; yet they inhabit a country, into the interior of which no European could penetrate without the certainty of a most dangerous fever. In some parts of South America when a slave makes his escape from bondage, he finds a safe asylum in some noted malarial jungle ; well knowing that his master would follow him thither at the risk of his life, and would rather lose his slave than attempt to pursue him.

Land-holders frequently take advantage of their being seasoned to some marshy situation ; by renting their farms at a very low rate, when a succession of casualties to strangers has prevented people in general from having any thing to do with such unlucky spots. In most cantonments in India there are certain marked houses known from their unhealthiness, and these are generally waste, or only occupied for a month or so by strangers. There are generally some good grounds for the reputed character they bear ; and though it be a popular opinion, it is perhaps the safest plan to entertain it. The state of sleeping or waking materially affects the disposition to miasma. A person may be exposed when awake to miasma and not suffer, but is much more predisposed to an attack if he is exposed to it asleep ; as if the guardian that protected the constitution while awake, went to sleep along with its master, leaving him unprotected. Hence the danger of sleeping in a marsh. Nevertheless a

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man may even sleep in a marsh with less harm if he take the precaution of tying a gauze veil over his face; hence an advantage of the native mode of sleeping with the head wrapped up in a cloth, which, no doubt, saves them from many an ague.

A belt of high trees intervening between a marsh and a town is known to afford a similar exemption to the inhabitants. Numerous instances are recorded of towns being suddenly subject to fever after the cutting down of such belts of trees; and of others being benefitted by having a grove of trees planted between the miasma and them to windward.

If I mistake not the Station of Purnea became suddenly unhealthy from the cutting down a certain grove of high trees in its neighbourhood.

All the types of intermittent fever may be occasioned by the same exposure to miasma. Four persons may be exposed at the same time, one may get a quotidian fever, one a tertian, one a quartan, and one may escape; and the one may be attacked an hour or two after the exposure, another a day or two after, and another a week or two after; the seeds of fever lying dormant in the constitution.

Such are some of the acknowledged properties of malaria.

It is a well known truth that marshes are the principal sources of this miasma, and hence its

XII. name of marsh fever; that the inhabitants who live contiguous to them are more liable to ague than others, where no marshes exist; that strangers on visiting marshy districts are attacked with ague, that they would elsewhere have escaped; that marshes may be deprived of their miasma by being drained and cultivated; and that cultivated lands may become noxious by being kept in a state of inundation. That Calcutta now is so much more healthy than it was in former years, has been chiefly indebted to the draining of its marshes and jeels, and cutting down jungle; and that cultivated lands may be almost depopulated by inundation, was manifested in the awful mortality from fever, that followed the great deluges of Balasore and the 24-Pergunnahs, bordering on the sea, of recent years; sweeping away thousands and thousands of the population. The station of Hansi, in Upper India, is another instance of the generation of fever from an excess of irrigation. The country around Hansi is naturally dry and arid, so much so that it was found necessary to convey water from a great distance by canals for the purpose of cultivation. Hansi was at one time and previous to the formation of canals a healthy station, but from the excess of irrigation, the country has become a perfect nursery for fevers, and is nearly uninhabitable. Hence also is the reason why the months of August, September, and October, are so eminently unhealthy. In these months the periodical floods are subsiding, the country is covered with sheets of water evaporating to dryness and abounding with decaying vegetation, each pool of which is a

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source of fever. During these months the inhabitants of many malarial countries fly from their homes as they would from certain death, nor venture to go back till the unhealthy season is over. The Tarai along the foot of the Himalaya mountains, the Runn at the mouth of the Indus, and the Sunderbunds of the Ganges, are in a great measure deserted in these seasons, few remaining exposed that can effect their escape. Many parts of the interior of India are in these months insulated by tracts of jungle, and no one who is aware of the consequence, or values his life, would willingly venture through them. During the months of May, June, July, August, September, and October, the jungles of Assam, are imminently unhealthy, and no European ought, if possible, to venture beyond the limits of Cantonments.

The same laws that operate in rendering marshes miasmatic, also operate though perhaps in less degree in the rice fields of Assam. Towards the end of the rains, and while the fields are still flowing with water, the ears are cropped and the straw is allowed to remain to ferment and form miasma. This is not a visionary idea, for so strong is this belief that rice fields produce miasma that in many places on the continent of Europe, and far less favourable to the development of malaria than India, the laws of the kingdom prohibit the growth of rice for that very reason.

5.
Rice Fields.

But marshes and rice *khates* are but two of the many sources of malaria to be seen on every hand in Assam. Every native of Assam knows

6.
Tanks & Pools.

XII. nursery for fever in the immediate vicinity of his house, called a tank or pond, and every poor man a pit or a pool, which seem as if made on purpose to supply them with miasma, as well as with muddy water and water lilies. I do not mean to attribute any blame to tanks and ponds if kept properly clean; they would then be both useful and ornamental: but from the weeds and jungle that in most cases are allowed to infest them, they exert the most baneful effects on the constitution of the inhabitants. If the ditches of Fort William were allowed to remain filled with stagnant water, and become a field for studying the botany of reeds and rushes, its present healthy character would speedily leave it; and were the numerous tanks throughout Calcutta, left to nature to overgrow with weeds, the consequences would be truly melancholy.

7.
Jungle.

Another hot bed of malaria is the quantity of underwood and jungle with which most native habitations are choked up, so impenetrable as to form a barrier to all encroachment from without, and a screen through which the eye of curiosity cannot penetrate. But this belt of jungle is also the seat of malaria, and the better it answers the purpose intended by its owners, the more concentrated is the malaria which the dense mass of vegetables that die every season engenders. These belts of jungle are pregnant with another evil; they are the usual resort for performing the calls of nature, and the effluvia from the daily deposit of so much filthiness comes in for a large share of the illness entailed upon the household.

Another cause of fever is the total disregard to ventilation in native houses. It is well known that a close confined atmosphere is the most favourable place for the action of malaria, and that nothing dissipates it so readily as a current of fresh air, but in native houses the doors are few, the windows still fewer, and both seem constructed on purpose to admit as little of the vital air as is consistent with the smallest possible quantity of light; and these are for the most part obstructed with mats or screens. Moreover, the premises are frequently surrounded by a lofty wall or matting, which with the trees outside, render it almost a matter of impossibility for any useful ventilation to take place. This same obstruction to ventilation is seen on the grand scale around almost every town in Bengal. The suburbs of every large city resembles a dense forest more than a habitation proper for human beings. Even the City of Calcutta is surrounded with a cordon of populated jungle that must be obnoxious to the inhabitants of its palaces, and the salt-water lake may be considered as a grand depot of fever.

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8.
Neglect of
Ventilation.

Another cause of miasma is the quantity of ruined houses, and deserted grounds around the ruins, with obstructed drains and decaying trees. I am afraid these are but too little thought of as injurious, even by a European Police

9.
Ruined
Houses.

Having stated the principal sources of malaria I shall next mention a few of the many causes that render the constitution susceptible of its

10.
Predisponent
Causes of Fe-
ver.

XII. action. A sound mind in a sound body has long been acknowledged to be the best safeguard against malaria ; a man in good health and of a cheerful frame of mind may be many times exposed to the influence of fever with impunity ; whereas if labouring under any bodily ailment or depressing passion, he is very liable to catch disease. Hence poor diet, bad water, scanty clothing, wretched houses, famine, fatigue, melancholy, prepare the body for the seeds of fever ; and the weak and inanimate are more frequently victims than the strong and the active.

11.
Depressing
Passions.

12.
Low Diet.

The exceedingly low rate of living among the poorer classes strongly predisposes to fever. I wish I could as easily point out how it could be amended as demonstrate its hurtful effects. Many of the articles of diet are very objectionable either from the material itself, the manner of preparing it, or its mode of cooking.

13.
Putrid Fish.

None is so deleterious as the half cured, or wholly putrid fish, so much in use by the poor. Fish prepared in this manner require little salt, and go a great way farther than if fresh or properly cured ; but in proportion as they spare the price of the individual they sow the seeds of disease in his frame. Raw rice, under-baked bread, raw green fruits, deficiency of salt, and the inveterate practice amongst the Assamese of eating opium, must have a powerful effect in lowering the tone of the constitution.

The poorer classes cannot afford the luxury of salt, and are in the habit of using wood-ashes as a substitute.

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14.
Substitute for
Salt.

No part of diet is more frequently at fault than the water used for drink. One would expect that the Natives of Assam, in common with other parts of India, so excessively careful of defilement in their manner of eating and drinking, would be very particular about their water their only beverage; and that nothing less than the produce of the crystal spring, or rain water in all its purity as it fell from the clouds, would satisfy them. But no nation I have ever seen are so notoriously indifferent about the water they drink. If we visit any of the legitimate places for lifting water, any of the ghauts on the river, we will see a dense mass of naked people of all sexes and sizes, standing up to their middles in water; some washing their clothes, some their bodies, and all of them stirring up as much mud from the bottom as they can, yet when their ablutions are completed, filling their pitchers where they stand for the day's consumption: probably, one of the common sewers of the bazar enters the river a few yards above the ghaut; it may happen that the surface of the water is strewn with the yet warm ashes of some lately incinerated human being, or that a putrifying carcase is revolving in an adjacent eddy. If we visit any of the private tanks, we will see a spacious pool of water shaded with tall trees, and garnished with weeds; the necessary reservoir of all the surface water of the neighbourhood: a perfect

15.
Impure Water.

- XII.** infusion of every thing offensive and filthy about the place ; and literally alive with animalculæ ; here too we shall see the same scene of washing clothes, and scrubbing bodies, and other acts of uncleanness. Yet from this same pool they draw their daily supply of water ; and wonder that they should become sick from using it.

16.
Bathing.

The universal practice of bathing prevalent in Assam has, I have no doubt, a bad effect upon the health of the people. In a country, such as India, where so much of the body is exposed naked to the accumulation of dust and clamminess of perspiration it was no doubt a wise and provident law that instituted ablution as a religious rite ; for no other plan so effectual could have been devised, to ensure cleanliness and a healthy state of skin. But I am afraid that bathing is often abused, that it is considered in the light of an ordinance of their religion, and is practised because people think it ought to be practised, without any regard to the season of the year, the state of the weather, or the condition of the body, as to health or disease. There no doubt are cold raw rainy days in the summer season, and bleak withering days in winter, when people even in good health would be much better in their beds at home than doing penance on the banks of a river ; and a person labouring under diarrhoea or dysentery, or internal inflammation of any kind, or under the influence of mercury, would be committing an act of great indiscretion in taking a cold bath. Yet we know that people do bathe every day while so

Ill-timed bathing is not the only instance of the religious laws of the country aggravating the diseases of the people and adding to the bills of mortality. The Hindoo practice of hurrying persons, dangerously ill, to the banks of the river and exposing them in the open air with their feet immersed in the water, and their body besmeared with the slime of the river till the ordeal puts an end to their existence, must be considered as a frequent cause of death.

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17.
Exposing Sick
on river side.

There is no doubt that thousands of lives are by this treatment taken away, that with proper care and nursing would have recovered. This custom equally repugnant to human nature with Suttee-ism is probably ten times more destructive to human life. Where one person's death was caused by Suttee-ism ten deaths may be caused by this abhorred custom. The friends of a poor dependant unfortunate widow, incited her to the commission of suicide in order to rid themselves of a relation who might claim a maintenance amongst them: the friends of a person dangerously ill take advantages of his helplessness, and hurry him out of the world, to rid themselves of a disagreeable acquaintance, or possess themselves of his inheritance: and if it should so happen that his constitution support him through this trial and he recover, he is looked upon as an outcast and a vagabond, because he did not die.

We hear of human sacrifices in Goomsur and other wild and barbarous places, and wonder that the earth does not gape and swallow

XII. up alive the blood-stained murderer : but we forget that in the most populous cities in India, even in the City of Calcutta, sacrifices of life no less atrocious in the eyes of humanity, are every day perpetrated. We have only to go to any of the *Murda Ghauts*, where we shall see the old, the young and the middle aged dragged away in the extremity of sickness from their homes, their families and their comforts, when such were most wanted ; and exposed on the river side on a *charpoy* with only two or three cold-blooded hired attendants preparing their funeral pile, and watching when the vital spark shall be extinguished.

Though there is no use in adducing proofs, to confirm this assertion, yet the following case is so applicable to that purpose that I shall perhaps be excused for inserting it. On an evening of January last I accompanied a Medical friend in a visit to a native lady of rank that had had a miscarriage that day at noon. We found her shut up in a close confined dark room, hot and suffocating almost beyond our endurance, and crammed full with attendants. The patient was a young woman to all appearance lately in good health. She had had no flooding and the placenta came away in the natural manner. She lay quite insensible, breathing short and laborious, pulse not to be felt even in the humeral artery, eyes fixed and open, skin of natural temperature. After prescribing for her and enjoining perfect quietness and rest we went away intending to return in an hour or two. About ten, when we called at the house,

we learned that they had carried her off to the river-side, where she soon after expired. I have not a doubt that if this woman had been allowed to lie quietly upon her back in her room that she might have recovered. In her condition it was dangerous even to raise her, nevertheless she was placed upon a bed, carried through a labyrinth of narrow passages and stair cases out of a very hot room into a cold atmosphere, and jolted along through the streets on men's heads to the *murda ghaut*, enough to cause the death of any one in such a condition. XII.

The scantiness of clothing, customary amongst the natives, strongly predisposes to fever; they have no adequate protection against the cold weather, and suffer most severely from the mornings and evenings. During the rains the Assamese wear what they call *jampies*, a sort of broad brimmed hat, about three feet in diameter, made of mats and split bamboos. This is one of the most sensible articles in dress that they have, but it is no uncommon thing for them to strip off the most part of their clothes during a shower, and stow them in the crown of the *jam-py* till the rain is over.

18.
Deficiency of
Clothing.

The most prevalent diseases amongst the Seapoys at Goalpara and Gohatti are intermittent fever and syphilis. This last disease is extremely common, and I have frequently had more men laid up by it than by all others put together. Gonorrhœa was comparatively rare; buboes in the groins were common at Goalpara, and often without any apparent cause; erup-

19.
Prevalent
Diseases.

XII. tions on the skin, itch, and ring-worm were very prevalent. Continued fever was rare, elephantiasis and goitre were hardly known, and leprosy but seldom seen.

Amongst the prisoners intermittent fever, dysentery, diarrhoea, and rheumatism were most frequent, and even amongst them continued fever was rare. I have seen but very little of small pox in Assam, though it every fourth or fifth year breaks out with great virulence. Inoculation with the small pox virus is practised by the natives; they have a strong prejudice against vaccination, this aversion to it is peculiar to the people of the plains; those of the hills are very willing to have it performed.

20.
Cholera.

Cholera, though not of every year's occurrence, occasionally breaks out with fearful violence. In May and June 1834, a large portion of the population of Assam was swept away by it. In the town of Goalpara alone, with a population of about 5,000, upwards of three hundred died of it. The natives that lived on the hill were comparatively exempt from it or had it in a milder form; this exemption has always been observed on previous visitations of Cholera. In 1834, Cholera continued to rage for about six weeks, its progress up the Brahmaputra was very well marked though slow. I first heard of it's being at Dacca, some time after at Jumalpoore, next it reached Goalpara, then it proceeded to Gohatti, and thence to Bishnauth, and all in regular succession. Its virulence seemed to have abated at Bishnauth, where only a small proportion died

of it. Several weeks elapsed during its progress from Dacca to Bishnauth. XII.

On my assuming Medical charge of Gohatti, I was surprised to find scurvy endemic amongst the prisoners, and that many of them had lately died of it. The mouth was the chief seat of the disease. It manifested itself first by a sponginess of the gums and looseness of the teeth, or by a foul ulcer inside the cheek : all the symptoms of profuse salivation rapidly ensued, the gums became a mass of suppurating matter, the teeth dropped out, the ulcers spread all over the mouth, the cheeks sloughed away, the patient sank exhausted, or if he recovered he was frightfully deformed. The Hospital stores contained almost no antiscorbutic. Oranges and lemons (indigenous to the Kassya Hills,) were then plentiful in the bazar, I ordered them to be bought up in basket fulls. I prescribed them ad libitum in every case and found them a perfect specific. I was fortunate in losing only one or two cases, and these were far advanced before they came under my care.

21.
Scurvy.

I cannot omit this opportunity of remarking that while a Sanatorium for the Lower Provinces has so long been sought for, and is even to this day a desideratum, that the frontier of Bootan should be overlooked. At this moment (20th September), while overcome with the oppressive heat and moisture of a low country flowing with water, I am looking out upon the mountains of Bootan capped with newly fallen snow. These mountains run along the whole frontier of Assam, and may be

22.
Sanatorium
on
Bootan
Mountains.

- XII. approached by many tributary branches of the Brahmaputra to within 15 or 20 miles, or less, of their base. The country between the extreme branches of these rivers and the hills is so level, that an excellent road could be made, with little difficulty or expence to the base of the hills; and the hills themselves rise so abruptly from the plain that the ascent could be made in a few hours. The only difficulty to be surmounted would be to obtain the consent of the jealous Bootan Government to a grant of one of their hill tops, with a right of open communication to and from it. There could be nothing unreasonable on the part of Government in making such a demand, and no real cause for jealousy on the part of the Booteas; for by an accommodation exactly similar and of the very utmost importance to these Mountaineers, they are allowed to hold extensive lands called dwars in the plains for the purpose of growing rice, for which their hills are not adapted; they paying a tribute merely nominal for the privilege.

I am fully convinced that a Sanatorium affording all the coldness and salubrity of Simla itself, and that congeniality of climate adapted to the restoration of a European constitution when broken by tropical disease, or worn out by a long residence in India, could be selected in that mountain range; and that it only requires encouragement to become the Mount Pelier of the Lower Provinces. The voyage thither from Calcutta and all parts on the Ganges as high as Patna, could easily be performed even by the present mode of navigation, in from 24 to 30 days,

and by steam in about one-third of that time. XII.
 Hundreds of valuable lives could be recruited there that must necessarily become extinct on a six months' voyage to Simla; and hundreds more who could not afford the very exorbitant charge of 240 Rs. a month for their accommodation on board a pilot schooner, or the little less heavy expences of a voyage to the Cape or New South Wales, could step into a comfortable boat, and be conveyed in a short time to a healthy climate at little more expenditure than the rate of living with their regiment.

Darjiling, at present under examination as a Sanatorium, is situated on this same chain of hills.

Before any material improvement in the salubrity of Assam can be effected, it will be necessary to cut down and clear away the noxious jungle, to reclaim its waste lands by cultivation, to drain its marshes, to clear out its tanks, to build the houses upon the hills, to abolish the use of opium, and be guided by the laws that generate and spread malaria.

The following Table as extracted from the Records of the Medical Board, will shew the comparative mortality amongst the Prisoners at Goalpara and Gohatti, for 1833:

Name of the Station.	Average strength, during the four quarters of the year.	Average admission, during the four quarters of the year.	Proportion of sick to strength.	Deaths by ordinary diseases, during the four quarters.	Deaths by Cholera Morbus, during the four quarters.	Ratio per cent. of deaths from ordinary diseases.	Ratio per cent. of deaths from Cholera Morbus.	General ratio per cent.
Goalpara,	342	79	1 to 5	10	"	2.95	"	2.95
Gohatti,	474	104	1 to 4	61	"	13.0	"	13.0

23.
 Comparative sickness of Goalpara and Gohatti.



The following valuable Table taken from Captain Pemberton's Report, will shew the comparative healthiness of the Eastern Frontier.

TABLE 4.

Statement of the Strength of Troops on the Eastern Frontier, the proportion of Sick and ratio per cent. of Deaths to Strength, for the years 1833, 1834 and 1835.

	DACCA.						JUMALPORE.						SYLHET.						GOWAHATTY.						BISNAUTH.					
	Corps.	Average strength per annum.	Total admissions per annum.	Transferred.	Deaths.	Ratio per cent. of deaths to strength.	Corps.	Average strength per annum.	Total admissions per annum.	Transferred.	Deaths.	Ratio per cent. of deaths to strength.	Corps.	Average strength per annum.	Total admissions per annum.	Transferred.	Deaths.	Ratio per cent. of deaths to strength.	Corps.	Average strength per annum.	Total admissions per annum.	Transferred.	Deaths.	Ratio per cent. of deaths to strength.	Corps.	Average strength per annum.	Total admissions per annum.	Transferred.	Deaths.	Ratio per cent. of deaths to strength.
1833.	53 Regt. N. I.	743	310	1	10	1.34	35 Regt. N. I.	556	201	0	16	2.85	Sylhet L. I.	938	836	4	17	1.81	Dett. 35 Regt. N. I. for the month of June.	187	8	0	0	0	Assam L. I.	1129	686	7	14	1.25
1834.	53 Regt. N. I. relieved by 50 Regt. N. I. in Dec. 1834.	754	597	18	11	1.46	35 Regt. N. I.	582	427	6	6	1.3	Sylhet L. I.	940	875	4	11	1.16	Dett. Assam L. I. for 6 months	197	67	0	1	0.50	Assam L. I.	1129	759	25	28	2.48
1835.*	50 Regt. N. I.	587	507	34	9	1.53	58 Regt. N. I.	669	442	0	3	0.45	Sylhet L. I.	941	1221	5	24	2.55	Dett. Assam Lt. Infy.	176	126	7	5	3	Assam L. I.	1093	464	11	8	0.73
	CHITTAGONG.						AKYAB.						KYOUK PHYOO.						SANDOWAY.											
	Corps.	Average strength per annum.	Total admissions per annum.	Transferred.	Deaths.	Ratio per cent. of deaths to strength.	Corps.	Average strength per annum.	Total admissions per annum.	Transferred.	Deaths.	Ratio per cent. of deaths to strength.	Corps.	Average strength per annum.	Total admissions per annum.	Transferred.	Deaths.	Ratio per cent. of deaths to strength.	Corps.	Average strength per annum.	Total admissions per annum.	Transferred.	Deaths.	Ratio per cent. of deaths to strength.	Corps.	Average strength per annum.	Total admissions per annum.	Transferred.	Deaths.	Ratio per cent. of deaths to strength.
1833.	11 Regt. N. I.	716	566	10	15	2.4	Dett. 25 Rt. N. I.	133	406	0	12	9	25 Rt. N. I.	255	651	0	21	8.40	Dett. 25 Regt. N. I. for 11 months	149	126	3	7	4.68						
1834.	11 Regt. N. I.	704	574	14	17	2.42	Dett. 25 Rt. N. I. for 3 ms.	113	50	0	1	0.95	25 Rt. N. I.	386	735	14	11	2.90	Dett. 25 N. I. for 4 months.	119	29	0	1	0.84						
1835.	55 Regt. N. I.	601	490	0	29	4.83	.....	.....	.....	.....	.....	.....	40 Rt. N. I.	559	952	4	37	6.60	Dett. 40 Regt. N. I. for May.	167	7	0	0	0						

* For the year 1835, the averages only extend from January to September.

I am indebted to James Hutchinson, Esq., Secretary to the Medical Board, for this most valuable document, which satisfactorily shews the comparative salubrity of the different stations on the Eastern Frontier, and the extent to which mortality may be anticipated under ordinary circumstances.

CHAPTER XIII.

- 1, *Revenue, Judicial and Police.* 2, *Feudal system.*
 3, *Revenue system of Kamroop.* 4, *Revenue Officers.*
 5, *Fees of Revenue Officers.* 6, *Private Estates*
how assessed. 7, *House Tax.* 8, *Land Tax.* 9,
Abolition of Capitation and House Taxes. 10, *Ci-*
vil Courts. 11, *Criminal Courts.* 12, *Police.* 13.
Omlahs Bengali. 14, *Language of Courts.* 15,
Public Crime. 16, *Punishment.* 17, *Insufficiency of*
Punishment. 18, *Area of Kamroop.* 19, *Classes of*
Land. 20, *Land Measure.* 21, *Population.* 22,
Stock. 23, *Revenue and Disbursements.* 24, *Crime*
committed. 25, *People killed by wild animals.* 26,
Population of Assam. 27, *Receipts and Disburse-*
ments of Assam.

The present Chapter I shall devote to the Revenue, Judicial and Police Departments. For the information contained in it, I am particularly indebted to the valuable papers of Captain Bogle's and Captain Matthie's, obligingly lent me by R. D. Mangles, Esq. Secretary to Government. As the mode of assessment used by the ancient Assamese Government is with but little modification practised at the present day, and as it exhibits anomalies very different from what prevails throughout India generally, I hope to be forgiven for entering somewhat into detail.

It was one of the laws of the Assam Government, that the land and the subject were

XIII.

1.
Revenue,
Judicial and
Police.

2.
Feudal
System.

XIII. equally the property of the State, and accordingly not only the houses and the lands, but the cultivators also were assessed. These were called *Pykes* or Serfs, and divided into squads of 3 or 4 called a *Gote*, each *Gote*, according to its calling or employment, was liable to be called upon to supply one of its *Pykes* to work for the good of the State. Hence the farmers, the fishermen, the boat builders, the oil-makers, the silk weavers, the tinkers, and the gold gatherers, all contributed their share to the Royal household, and filled it with the fat of the land. These *Pykes* had their Officers over hundreds and Officers over thousands; and the whole Serf population were under as rigid discipline as a regular army, and were obliged to take the field every man of the *Gote*, if called on to do so.

From an arrangement of this nature alone could the enormous public works, the tanks and bunds throughout Assam, have been effected: for the *Pyke* on duty cost the Government nothing, the other *Pykes* of his *Gote* contributed every thing for his subsistence, and the Sovereign had only to point out the work to be done. As a remuneration for these services each *Pyke* was allowed 3 pooras of land rent-free for cultivation, and in the event of their services not being required, each *Pyke* was liable to a poll tax of 2 or 3 rupees. This *Pyke* system was for some time continued by our Government, but from its not being found to answer well, it is now obsolete. It would be foreign to

this paper to enumerate all the peculiarities of the ancient Assam Revenue system, but I believe I shall be able to give a more explicit account of the mode of collecting the Revenue of the present time, by detailing that in use in some particular Zillah, and for that purpose I shall select Kamroop. XIII.

The Zillah of Kamroop is divided into 54-Pergunnahs, 5 Deshes, 9 Dwars and 7 Choumooas, and these when large are subdivided into Talooks and Mouzahs, with a still further distinction into Kiraj and Lakiraj Lands; Kiraj being applied to lands assessed to full amount, and Lakiraj to privileged lands which are assessed at a low rate.

3.
Revenue
System of
Kamroop.

Each Mouzah or Village or Farm as it may be, has a headman called a Takooreea, or Mundul or Patgheri, who, with the assistance of a writer called a Gong-ka-goti, collects the Revenue of the Mouzah and pays it over to the Chowdrie, his immediate superior. The Chowdrie commonly extends his sway over five or more Mouzahs called a Talook, and is assisted by a Putwari, who keeps the account of the Pergunnah, and renders a statement to the Collector. The Revenue of Talooks generally average about 500 rupees per annum.

4.
Revenue
Officers.

These Officers receive a per-centage upon the amount of their collections as follows :

5.
Fees of Re-
venue Officers.

Chowdrie gets 7 per cent.	Takoorea gets 4 per cent.
Putwari „ 1 „	Gong-ka-goti „ 2½ „

XIII. Besides this they receive rent free land to the following amount on every 100 rupees of Collection :

Chowdrie gets 1 pooras.	Takoorea gets 6 pooras.
Putwari „ ½ „	Gong-ka-goti „ 4 „

These petty Officers are allowed a certain number of peons, each of whom is entitled to a certain portion of rent free land or Maun-muttee, as it is called.

6.
Private Es-
tates how
assessed.

Heritable proprietors with an income of more than 200 Rupees per annum, appoint their own Chowdries if they please, who pay the assessment into the Collectors ; those with less than 50 Rupees of annual income pay into Chowdries of Talook. Shuster's land or land set apart for religious or charitable purposes, of which kinds there are from 6 to 10 portions in each pergunnah, are assessed by the Shusters Burwa, who pays the amount direct into the Collector. In like manner all the Temple lands have each its own manager, who pays the Revenue into the Collector not into Chowdrie.

7.
House Tax.

Until lately the Revenue was raised chiefly by taxes upon houses and lands. Each house or family paid a tax more or less according to their means. The number of families instead of being calculated according to the number of hearths, was estimated by the number of Churoos or family plates so called, each family possessing one from which they all eat ; so that the number of families was most correctly known from the Churoos ; every family was taxed according to

its wealth, and the plan in use to ascertain **XIII.**
that was to number their ploughs. Hence, a
family with 3 Ploughs paid 3 Rs. per annum.

"	2	"	2	"
"	1	"	1	"
"	without a plough		12 As.	"

This rate was equal in Kiraj and Lakiraj lands.

The next source of Revenue was the land-tax.

8.
Land Tax.

This was generally determined by measurement, each poorah of land being assessed according to its quality.

<i>Kiraj Lands.</i>				<i>Lakiraj Lands.</i>	
Roopect Land,	1st class	paid	1 Rs.	}	4 As. per poorah.
"	2d	"	12		
Bautullie,	1st	"	12	}	2 "
"	2d	"	8		
Furringuttee,	1st	"	8	}	1 " 6½ "
"	2d	"	4		

Many pieces of land did not admit of measurement such as sand-banks, islands, &c. constantly changing, and with only spots here and there fit for cultivation. These were assessed by the number of ploughs; the ryot paying Rs. 2-8 for as much as he could cultivate with each plough.

Though the house tax of the Kiraj and the Lakiraj were the same, the land tax as seen above is so trivial on the latter as to be merely nominal.

Very lately the capitation and the house taxes were abolished throughout Assam, and to meet the deficiency of Revenue the taxes on

9.
Abolition of
Capitation
and House
Taxes.

XIII. lands were increased in the following proportions : in addition to the rate above stated.

Bāri Lands,	Rs. 1	per poorā.
Bāri ditto,	As. 4	„
Roopeet ditto,	„ 4	„
Bautullie ditto,	„ 4	„
Furrunguttee ditto,	„ 2	„

The Judicial and Police Departments as well as the Revenuc, are all three performed by the Senior Assistant to the Agent of the Governor General or Commissioner.

^{10.}
Civil Courts.

1. All Suits above 1,000 rupees are cognizable by the Commissioner's Court alone, as well as all Appeals from decisions of the Senior Assistant's Court.

2. All Suits between 500 and 1,000 rupees are decided by the Senior Assistant, as also Appeals from the inferior Native Courts.

3. All Suits between 100 and 500 rupees are decided by the Sudder Moonsiff's Court, who hears Appeals from the Moonsiff's Panchaet.

4. All Suits under 100 rupees are decided by the Moonsiff's Panchaet.

^{11.}
Criminal
Courts.

The Senior Assistant, aided by a Jury, investigates all crimes of a heinous nature, and submits the case for confirmation to the Commissioner.

The Police is managed by Darogahs, Thanadars and Peons stationed throughout the District, assisted by the Takoorias or Patgeris and Chowdries of the Revenue Department.

XIII.

12.
Police.

The greater number of the Native Establishments is composed of Bengalis, the Assamese form but a small share, being found less fitted for office and only a few being qualified.

13.
Omlahs
Bengali

The language in general use is Bengali, all the business of the Courts is written in that character with the exception of some Roobakaris, which are written in Persian.

14.
Language
of Courts.

Public crime generally speaking is very much on the decrease, murder is very rare, and burglary, cattle stealing and petty thefts are the most common as will be seen from Tables. Nine-tenths of the complaints in the Civil Courts are frivolous, and many of them false, or done in the spirit of annoying the defender.

15.
Public Crime.

Fine and imprisonment are the only punishments, now that corporal punishment has been abolished; but few are able to pay a fine, and most who can pay prefer imprisonment to loss of money. The old system of the ratan is now much wanted, the guilty individual was by a few stripes made sensible of his misdemeanour, the example it shewed was much more striking and its impressions were not soon forgotten, and none but the offender was a sufferer. In comparison to ratanning, the present system of

16.
Punishment.

XIII. imprisonment has no terrors to the guilty, he knows if he is imprisoned he shall have a home and a subsistence ; if he is not troubled with a moderate share of shame, he may contrive to live not so bad a life after all. But the evils of the present system do not rest with the offender ; if he has a family depending upon him for food and clothing, they too are made to suffer for the crime of the father, by being left destitute, and the misery thus entailed can be readily imagined.

17.
Insufficiency
of Punishment.

The want of corporal punishment is no less felt amongst the Seapoys of the Provincial Battalions than amongst the prisoners. Few of them are gifted with much *esprit de corps*, their principal, often their sole, object in joining the regiment is to serve four or five years, and save a few rupees to enable them to establish themselves in petty farming: a court martial can have but little terror for them, and its severest sentence of dismissal from the Service is at worst only a disappointment, and not unfrequently a desirable release from their engagement.

I believe I am correct in asserting that both the Civil and Military authorities in Assam, feel their efficiency impaired from not being able to avail themselves of the salutary influence of the ratan.

Kamroop is divided into Kamroop north of the Brahmaputra, Kamroop south of the Brahmaputra and the Islands of the River. The following Tables shew the Area in Assam Pooras, the different kinds of Land, and Land Measure, Population, Stock, Revenue and Disbursement for 1834-5.

18—AREA OF KAMROOP.

	Rice cul- tivation.	Booree Land.	Village Land.	Unculti- vated Land.	Total.	Remarks.
N. Kamroop, S. Kamroop, River	211437 $\frac{1}{4}$ 71563 $\frac{1}{4}$	48177 $\frac{3}{4}$ 10710 $\frac{1}{4}$	62429 12755 $\frac{1}{3}$	531962 $\frac{1}{4}$ 312452 $\frac{1}{3}$ 72015	854006 $\frac{1}{4}$ 407482 $\frac{1}{2}$ 72015	The River in- cludes the site of town Gohatti.
	283000 $\frac{1}{2}$	58888	75184 $\frac{1}{2}$	916429 $\frac{3}{4}$	1333503 $\frac{3}{4}$	

About $\frac{1}{10}$ of Country is Village and Plantation Lands.

$\frac{2}{10}$ Under Rice Cultivation.

$\frac{7}{10}$ Waste as Jungles, Hills, Rivers.

19—CLASSES OF LAND.

	1st Class or Roopeet.				2d Class or Bautullie.				3d Class or Furringutti.				Total Cultiva- tion.			
Kiraj, ..	101135	0	0	12	20973	3	0	3	30508	1	3	3	152617	0	3	18
Lakiraj,	6763	3	3	12	12051	2	0	8	12946	3	4	12	92636	1	3	12
	107898	3	4	4	33025	5	0	11	43455	1	2	15	245253	2	2	10

20—LAND MEASURE.

1 Tar Square, = 1 Leesa. | 5 Khatas, = 1 Doon.
20 Leesas, = 1 Khata. | 4 Doons, = 1 Poora.

A Poora is equal to 3 $\frac{1}{2}$ Bigas, equal to about 1 $\frac{1}{2}$ Acre.

21—POPULATION.

	Churoos.	Adult Men.	Adult Women.	Boys.	Girls.	Slaves and Bondsmen.	Slaves and Bondswomen.	Total of Souls.
Kiraj,	35941	51211	42704	22403	13098	5793	4161	139370
Lakiraj,	29174	39069	30724	15807	8250	5810	4287	103947
Grand Total.	65115	90280	73428	38210	21348	11603	8448	243317

Probably 300000 is nearer the population than the number stated; of these there may be—

Mahomedans, 20000

Hindoos, 280000

22—STOCK.

	Ploughs.	Plough Cattle.	Cows and Heifers.	Buffaloes.	Total Horned Cattle.	Remarks.
Kiraj,	30031½	60063	78408	422	138893	
Lakiraj,	16084	32168	49175	434	81777	
Total..	46115½	92231	127583	856	220670	

23—REVENUE AND DISBURSEMENT.

Gross Revenue,	0	0	0	0	213348	4	15	3
Add Ferry Fund,	0	0	0	0	1006	0	0	0
Bootan Tribute,	0	0	0	0	2937	12	6	2
					217292	1	5	5
Mofussil Charges,	31751	10	13	1				
Annual Sudder ditto.	80400	0	0	0				
					112151	10	13	1
Balance saved.					105140	6	8	0

24.

Comparative Statement of Crimes of a heinous nature ascertained by the Police Officers or otherwise, within the District of Kamroop, for 1833 and 1834.

Zillah, ..	Year.	Deceit.	Highway Rob- bery.	Burglary.	Cattle Steal- ing.	Theft.	Affray.	Wilful Mur- der.	Homicide.	Receiving Sto- len Property.	Arson.	Rape.	Adultery.	Perjury.	Forgery.
Kamroop,	1833	20	2	289	134	126	9	0	9	0	5	4	1	3	6
	1834	17	1	120	22	120	6	0	5	0	4	2	1	2	2

25.

Statement of the number of persons known to have been killed by wild Animals within the District of Durrung, during 1833 and 1834.

Year.	By wild Elephants.	By wild Buffaloes.	By Tigers.	By wild Hogs.	By Alliga- gators.	Total.
1833	17	2	4	2	0	25
1834	17	0	8	1	1	27
				Grand Total.....		52

26—POPULATION OF ASSAM.

Districts.		
Assam Rajah, .....	.....	220000
Durrung, .....	.....	89519
Nowgong, .....	.....	90000
Kamroop, .....	.....	300000
Goalpara,	Not ascertained but probably,	100000
	Grand Total. ..	799519

CHAPTER XIV.

HILL TRIBES OF ASSAM.

- 1, *Booteas*. 2, *Akas*. 3, *Duphlas*. 4, *Koppachors*.
 5, *Miris*. 6, *Abors*. 7, *Bor-Abors*. 8, *Mishmis*.
 9, *Kangtis*. 10, *Bor-Kangtis*. 11, *Singphos*. 12,
Mattucks. 13, *Nagas*. 14, *Muniporis*. 15, *Cacharis*.
 16, *Kassyas*. 17, *Garrows*. 18, *Rabas*. 19, *Lalungs*.
 20, *Chooteas*. 21, *Mikirs*.

As the very numerous hill tribes that surround Assam, occupy a prominent place in the statistics of the province, either from their contributing largely to the population and tillage of the valley, from the trade they maintain with the Assamese, the hostile incursions they still occasionally make upon their unsuspecting neighbours, the treaties of tribute or alliance that unite their interests with Government, the stern neutrality of their policy towards strangers or the determined resistance to all ingress into the interior of their country, I shall endeavour to give a brief outline of the relative position of each in its respective order.

I am afraid, that what I have previously written, may be thought somewhat too elaborate; but, my excuse is, that it is the topography not of a single Zillah, but of a whole kingdom; and to provide against any charges of prolixity

XIV.

HILL
TRIBES.

XIV. in this division I hope I need only premise the
HILL number of states that compose it, each of which
TRIBES. might be made the subject of a separate
paper.

Few nations bordering upon the British dominions in India are less generally known than those inhabiting the extreme N. E. Frontier of Bengal; and yet, in a commercial, a statistical, or a political point of view, no country is more important. There our territory of Assam is situated in almost immediate contact with the empires of China and Ava, being separated from each by a narrow belt of mountainous country, possessed by barbarous tribes of independent savages, and capable of being crossed over in the present state of communication in 10 or 12 days. From this mountain range, navigable branches of the great rivers of Nankin, of Cambodia, of Martaban, of Ava, and of Assam derive their origin, and appear designed by nature as the great highways of commerce between the nations of Ultra Gangetic Asia. In that quarter, our formidable neighbours, the Burmese, have been accustomed to make their inroads into Assam; there, in the event of hostilities, they are certain to attempt it again; and there, in case of its ever becoming necessary to take vengeance on the Chinese, an armed force embarking on the Brahmaputra, could be speedily marched across the intervening country to the banks of the greatest rivers of China, which would conduct them through the very centre of the celestial empire to the ocean.

This beautiful tract of country, though thinly populated by straggling hordes of barbarians, and allowed to lie profitless in impenetrable jungle, enjoys all the qualities requisite for rendering it one of the finest in the world. Its climate is cold, healthy, and congenial to European constitutions; its numerous crystal streams abound in gold dust, and masses of the solid metal; its mountains are pregnant with precious stones and silver; its atmosphere is perfumed with tea growing wild and luxuriantly; and its soil is so well adapted to all kinds of agricultural purposes, that it might be converted into one continued garden of silk, and cotton, and coffee, and sugar, and tea, over an extent of many hundred miles.

XIV.

HILL
TRIBES.

The Hill Tribes of Assam may be divided into two grand divisions, those on the north of Assam, viz. the Booteas, Akas, Duphlas, Koppachors, Miris, Abors, Bor Abors, Mishmis, Kangtis, and Bor Kangtis; and those on the south in continuation of the circuit, viz. the Singphos, Mattucks, Nagas, Munniporis, Cacharis, Kassyas, and Garrows.

Of all these the Booteas are the most important, and as they are the first in this arrangement, I shall commence with them.

SECTION I.—BOOTEAS.

- 1, *Boundaries and Extent.* 2, *Cultivation.* 3, *Dwars.*
 4, *Tribute to Honorable Company.* 5, *Government,*
Dhurm Rajah. 6, *Daeb Rajah.* 7, *Capitals.* 8, *Reve-*
nue and Pay of Public Officers. 9, *People.* 10, *Army.*
 11, *Religion.* 12, *Anomalous Marriages.* 13, *Trade.*

XIV. Boot or Bhot, is a term generally applicable
 HILL to that middle ground that lies between the great
 TRIBES. Himalya range and the plains, and the inhabi-
 1. tants are known by the name of Bhoots or
 Boundaries Booteas; but the term Bootan is confined to
 and that hilly country, the centre of which is due
 Extent. north of Goalpara. Bootan is bounded on the
 west by the Sikim country, on the north by
 Thibet, on the east by the Akas, and on the
 south by Assam. Its length from west to east
 is about twenty-two days' journey, and breadth
 from north to south from ten to fifteen.

2. Though a cold mountainous rugged country,
 Cultivation. it is in a forward state of cultivation; there is
 but very little level land in the interior, but the
 brows of the hills are cut out into terraces, the
 one rising above the other, and irrigated by nu-
 merous mountain streams. The mountains to-
 wards the plains rise so very perpendicularly
 that there are but comparatively few places
 where an entrance on foot or on horseback can
 be effected; the chief of these I have already
 mentioned in Chap. I., para. 12. The roads

are not adapted for any kind of carriage, and the conveyance of the country is either on the shoulders or ponies.

XIV.
HILL
TRIBES.

The territory of Bootan is properly confined within the hills ; but, during the ancient Assam Government, certain lands in the plains were from political reasons allotted them for the cultivation of rice, for which their hills were not adapted. These lands were called dwars, and to guard against the Booteas claiming them in perpetuity, they were allowed to keep possession and act as sovereigns only during eight months of the year (the season of cropping) ; while they reverted to the Assam Government during the other four months. This constant change of jurisdiction afforded a favourable resort for all the vagabonds of both countries, and these dwars long continued the head quarters of gangs of robbers and other delinquents, who made incursions either into the hills or the plains as it suited their convenience. These dwars, besides contributing greatly to the sustenance of the Booteas, also yield a considerable revenue to the Bootan Government. They are rented by some of the officers of state, who pay tribute amounting to about forty thousand rupees yearly.

3.
Dwars.

A small tribute, merely nominal, was exacted from the Booteas on account of these dwars, consisting of—

4.
Tribute to
Honourable
Company.

24 Tolahs Gold Dust,
30 Ponies,

XIV. 24 Bags of Musk,
 24 Yaks' Tails,
 HILL 24 Blankets,
 TRIBES. 24 Daggers,

valued in toto about 30,000 rupees. On our Government assuming the sovereignty of Assam, the same privilege on the same conditions was granted to them, and still continues unaltered. But the value of these articles has of late years been very much deteriorated; the ponies they send are the lame, the blind, the vicious and diseased; the musk is generally largely adulterated with dried blood; the blankets are mere ribbons about nine inches broad and coarse as gunny bags; and the daggers have nothing of a dagger but the name.

5.
 Government
 Dhurm Rajah.

The Government of Bootan is vested in the Dhurm Rajah and the Daeb Rajah. The Dhurm Rajah does not condescend to trouble himself with worldly matters, but devotes his time and attention entirely to religious concerns. At the same time that he is considered the real Sovereign of the people, he is looked up to as their spiritual guide and even worshipped as a god. The Dhurm Rajah is believed never to die, but when the corporeal frame of his temporary abode has been worn out and committed to the dust, the etherial essence takes possession of some newly created body, and is found regenerated in some infant child.

6.
 Daeb Rajah.

The Daeb Rajah, though subservient to the Dhurm, and only holding the office of Prime Minister, may be called the actual Sovereign.

On him devolves all transactions with foreign Governments as well as the internal affairs of state. The office is not hereditary, for any individual may rise to the dignity; neither is it an appointment for life, but only for a series of years. He may resign office if he thinks proper, and that period is frequently cut short by some alleged mismanagement or the intrigue of opposing parties. Eight chief officers of state sit in council with the Daeb Rajah, without whose concurrence he cannot proceed. 100 Zinkaubs or Zinkaffs attend upon the Daeb Rajah in readiness to dispatch upon any business of the Government.

XIV.
HILL
TRIBES.

Tassisudon is considered the capital of Bootan, but the Court only reside there during the hottest weather. In the winter season it is deserted on account of the intense cold, and Dosen or Punaka becomes the seat of Government. This emigration is common with many of the inhabitants, who cultivate one farm in the mountains in summer, and another in the lower lands in winter.

7.
Capitals.

The whole revenue of Bootan does not amount to much more than three lacks of rupees. The country is farmed out in Rajhships, the holder being some officer of state who pays a certain sum in cash yearly. All public officers are paid in produce from the public stores, a mere subsistence; and such as no public officer would be contented with unless some perquisites or privileges were attached to office. But extortion is a great source of income to

8.
Revenue and
Pay of Public
Officers.

XIV. Government servants in Bootan, besides they monopolize all the trade of the country, for none
HILL but they are allowed to trade with a foreign
TRIBES. country. Even the Dhurm and the Daeb Rajahs have large capitals invested in trade.

9.
People.

The Booteas are a middle or rather undersized race of men, more remarkable for tension of sinew than weight of limb; their features are purely Tartar; their dress consists of a tunic of coarsest cotton or woollen cloth, secured by a waist belt and coming down below the knees. In general they wear no tail, but have their hair hanging loose about their ears, or wound round their heads in a fold of cotton; however I have seen some wearing their hair in the Chinese fashion. Their persons are extremely filthy, and there is an air of meanness and poverty about those holding offices of considerable trust and importance, betokening a very poor pittance allowed for their services; they are acknowledged to be a very quiet, industrious and civilized race; many of their laws and customs they have copied from the Chinese. The Chinese themselves are not more guarded against the visitation of foreigners, and in any attempts to enter their country, they are instantly opposed by parties in charge of the dwars, or passes, who are proof against either recompense or entreaty.

10.
Army.

No race have less genius for war than the Booteas, the petty feuds that frequently break out amongst themselves only excite our ridicule; their grand tactic is ambuscade, and unless

they can take their enemy at a disadvantage they very rarely join in open combat. Yet their soldiers go well cased in iron helmets and chain armour or mail; they carry matchlocks which they are afraid (and not without reason) to fire; and lots of knives and bows and arrows. The people go armed at all times, and even the women wear knives for their protection.

In the field every man provides his own subsistence. The Bootea soldiers are held in the utmost contempt by our Seapoys. On a late occasion a skirmish took place on the frontier between about 700 Booteas and 70 men of the Assam Sebundy Corps, when the former were, after the second volley, driven in consternation to their hills, with the loss of upwards of 25 men. The Sebundies had not a man wounded.

The religion of Bootan is Buddhism, their priests are called Gelums who live in Monkish celibacy. They are very numerous and form a large proportion of the populace. To them is intrusted the funeral rites of the people. Public places for the incineration of the dead are built, the Gelums attend the ceremony; when the body is reduced to ashes, the ashes are put into a brass vessel and carried in procession to some river into which they are thrown, and the Gelum claims the vessel as his perquisite. Convents are not unfrequent in Bootan.

Prostitution is very common; most of the women, it is reported, spend their earliest years

XIV. HILL TRIBES.

11. Religion.

12. Anomalous Marriages.

XIV. in that condition, and it is no uncommon thing
HILL for two or three brothers to club together and
TRIBES. share one woman between them. The eldest
brother is considered the father of what offspring
may take place, and the younger as uncles.

13.
Trade.

✓ The trade with Bootan is at present very in-
considerable, not so much from there being no
scope, as from the exclusive privilege of its
government and servants to trade; and the
prohibition of private individuals. Horses are
the principal export, but no mares are allowed
to go out of the country. If a European Re-
sident were established at the Capital and this
monopoly abolished, there is reason to believe
that a very important trade might be estab-
lished with Bootan. English merchants could
far undersell them in woollens and coarse cot-
tons, and in return might get large quantities
of musk and Cashmere wool; the musk deer,
and the shawl goat being indigenous. Barter
is the most general mode of trading in Bootan.
When the government are hard pressed for
money they frequently dispatch a messenger
to one of the stations in the plains with some
article of value. I remember a Zinkaff coming
to Goalpara, bringing two wretched ponies with
him and offering them to the Magistrate for
so much pure gold as he should think them
worth. The Dhurm Rajah had then lately
died, and was found regenerated in a child.
On installing him in office it is necessary to
cover the palace with gold, and this was one
of the plans adopted for raising the sum. On
another occasion, a party arrived with a maund

of ivory, which they valued at 400 rupees; in exchange for this they demanded a musket with 8lbs. of gun-powder, to be valued at the discretion of the Magistrate, and the balance in cash; but I believe neither speculation answered their purpose.✓

XIV.
HILL
TRIBES.

SECTION II.—AKAS, DUPHLAS, AND KOPPACHORS.

1, *Fierce People.* 2, *Levy Black Mail.*

Of these three tribes but little is known, more than that they are a warlike ferocious people, who make plunder their profession, and live in a good measure by levying black mail from the cultivators in the plains. But Government have lately commuted the black mail to an equivalent in cash paid out of the Public Treasury. Not long ago a party of Duphlas suddenly surprised a Havildar's guard of the Assam Light Infantry stationed on the Chardwar frontier, and cut almost every man, woman and child to pieces.

1.
Fierce People.

2.
Levy Black
Mail.

SECTION III.—MIRIS.

1, *Extent.* 2, *Manners and Customs.* 3, *Eat Poisoned Animals.*

The Miris occupy that strip of alluvial land along the northern bank of the Brahmaputra, from the large island Majuli to the river Dihong, the northern branch of the Brahmaputra; and are bounded on the north by the hill country of the Abors. Till of late years, this district was deserted on account of the ravages of the

1.
Extent.

XIV. Abors; but on our affording them protection, the original inhabitants returned. The land is still very thinly populated, and the only cultivation is along the banks of the great river. Their head village is Motgong.

2.
Manners and
Customs.

The manners and habits of the Miris are wild and barbarous, and their persons filthy and squalid; they use a language different from the Assamese, and make use of bows and poisoned arrows, as a defence against their enemies. They are expert marksmen; and the poison used is so fatal, that even a scratch of their arrow is followed with certain death. They eat all sorts of wild animals, not excepting those killed by their own poisonous arrows. The Miris are an industrious race, and partial to living in the skirts of the forests, clearing new ground, which they cultivate for a year or two, and then moving off to another place, when the soil is exhausted. A great deal of opium is grown by the Miris, which they barter for grain with the Assamese.

3.
Eat Poisoned
Animals.

SECTION IV.—ABORS, BOR-ABORS, AND MISHMIS.

1, *Extent.* 2, *Houses.* 3, *Hospitality.* 4, *Preserve*
Skulls of Cattle. 5, *Migration.* 6, *Trade.*

1.
Extent.

These tribes inhabit an extensive range of mountainous country, along the southern exposure of the great Himalaya chain, from the 94th to the 97th degree of east longitude, and border with Thibet and China. It is difficult to form a conception of the extent of these tribes, but they are not to be despised; for during the insurrection of the Muamarias, no less than

17,000 Abors joined to drive that tribe out of Assam. It is probable that at no ancient period these two tribes were unconnected; but the Mishmis, are now considered by the Abors as dependent upon them, and treated as slaves. Besides the Mishmis here mentioned as subservient to the Abors, there are several tribes of them, such as Muzu-Mishmis and Taen-Mishmis inhabiting the extreme branches of the Lohit or eastern channel of the Brahmaputra, who are probably independent. These tribes possess one of the lowest grades of civilization, they occupy numerous villages along the precipitous shores of the two great northern branches of the Brahmaputra, the Dihong or Sampo, and the Dibong.

XIV.

HILL
TRIBES.

Their houses are so constructed that the perpendicular side of the rock forms one wall : the floor is made of bambus, with one side supported on the rock, and the other on beams driven into the ground. The space underneath is inhabited by the cattle, and the interstices in the floor afford the double advantage of showering down all the offal to the herd below, and preventing the accumulation of filth and nastiness.

2.
Houses.

Though the snows of their mountain home have narrowed their means of subsistence, and limited their intercourse to their immediate neighbours, yet they are a hospitable and even a social race ; and a constant round of festivity is kept up from one end of the year to the other. Each chieftain kills the fatted bullock in turn ; all his associates are invited to par-

3.
Hospitality

XIV. take of the good cheer: the host is in his turn
HILL a guest at the next feast; and thus a recipro-
TRIBES. city of entertainment is insured.

4.
 Preserve
 Skulls of
 Cattle.

Nor are these hospitable rites allowed to be forgotten; the skull of every animal that has graced the board, is hung up as a record in the hall of the entertainer; he who has the best stocked Golgotha, is looked upon as the man of the greatest wealth and liberality; and when he dies, the whole smoke-dried collection of many years is piled upon his grave, as a monument of his riches, and a memorial of his worth.

5.
 Migration.

These people, accustomed to a temperature at and about the freezing point, seem to dread an exposure to the heat of the low countries during the summer, and make their descent to their markets at Suddia only in the cold weather, and take their departure to their snows as soon the Simala tree puts forth its blossoms.

6.
 Trade.

They bring along with them a few bags of musk, and musk deer skins; some ivory, a few copper pots, which they obtain from the Lama country; and a considerable quantity of a vegetable poison called Bisa, used in poisoning arrows. These they exchange for glass beads, of which they are very fond; and cattle, for the purpose of eating. The musk is for the most part adulterated; a portion of the genuine musk being abstracted to make into artificial bags, and its place filled up with dried blood.

SECTION V.—KANGTIS.

- 1, *Extent.* 2, *Descent.* 3, *Superiority.* 4, *Suddia.*
5, *Force.*

The Kangtis are the most civilized of all these mountain tribes; they inhabit that triangular tract of country bounded by the Lohit on the one side, by the Dihong on the other, and by the mountainous country belonging to the Mishmis on the third.

They are descended from the Bor Kangtis, a powerful race, situated on the sources of the Irrawaddi. About fifty or sixty years ago, they emigrated from their native country, and availing themselves of the civil war then raging throughout Assam, took forcible possession of the country they now enjoy, ejected the reigning Chieftain; the Suddia Cowa Gohaing; and the Kangti Chief, usurping his name and jurisdiction, reduced his subjects to dependence or slavery.

The Kangtis, by a vigorous mode of government, and holding out an asylum to refugees from other states, soon rose to eminence. They are now a superior race to all their neighbours; they are tall, fair, and handsome, considerably advanced in civilization, and are endowed with no small share of military courage. Their religion is Buddhism; but Hinduism is gaining progress. They are amongst the few tribes who have a written character, and can read and write the Burmese language, and understand it when spoken. Their own language, though written, and in

XIV.

HILL
TRIBES.

1.
Extent.

2.
Descent.

3.
Superiority.

XIV. character a good deal resembling the Burmese,
HILL is quite different, and closely resembles the ori-
TRIBES. ginal Ahom. Every boy is taught to read and
 write it by the priests.

Suddia is the capital of the Kangti country, and the Chieftain is known by the name of the Suddia Cowa Gohaing, and claims descent from the Royal family of Assam. The Suddia Cowa Gohaing is believed to be a firm friend of Chandra Kant's, the ex-rajah of Assam; when formerly driven from the kingdom, the Suddia Cowa had influence enough at the Court of Ava to obtain the assistance of the Burmese to restore him to his throne.

4.
Suddia.

Suddia is situated on the right bank of the Kunil or Kundil nallah, and about six miles above its junction with the Lohit. It is a place of some importance, and has a population of about 4000 men, exclusive of women and children. Its trade is rapidly increasing; all the necessaries of life are procurable: its exports are gold and silver, amber, musk, and ivory; Kangti daus, Chinese and Burmese trinkets; Bisa-poison, and dye-stuffs, called Mishmi-tita, and manjit. The Mishmi-tita, manjit, and lime, triturated with water, and allowed to digest in an earthen pot for a month, makes a beautiful permanent red dye. The daus are of a high order, and are so much prized as to bring 12 rupees a piece. They are manufactured by a rude wild race, called Kunungs, (slaves to the Kangtis,) who are situated on the

extreme branches of the Irrawaddi, who can neither read nor write.

XIV.

HILL
TRIBES.

The country around Suddia is composed of the richest alluvial soil, well adapted for cultivation, but is generally flat and liable to inundation. A large portion of it is waste, and overgrown with jungle: it is closely surrounded by the snowy mountains, which are only about thirty or forty miles distant; and the water of the river is so cold, that of itself it serves to cool wine for table.

Suddia is the most advanced post we possess on the north-east frontier. Four companies of the Assam Light Infantry are stationed there, under the command of a European Officer, invested with political authority. Two gun-boats are also stationed there, under the command of a European—each boat has one 12-pounder mounted on slides, and is well manned and equipped for service: one of the boats is manned by Kangtis, who give much satisfaction. There is also a small stockade erected, with a few guns mounted. Suddia has hitherto preserved a healthy character. The Suddia Cowa Gohaing, though he pays Government no tribute, acknowledges the Company's supremacy, and is bound to furnish a contingent of 200 men. That contingent is supplied by arms and ammunition at the expense of Government; they are drilled by the Subadar of the Assam Light Infantry four months in the year, and the arms, when in want of repair, are forwarded to head-quarters at Bishnath. No

5.
Force.

XIV. Medical Officer is attached to Suddia. An
 HILL Apothecary is entrusted with Medical charge.
 TRIBES.

SECTION VI.—BOR-KANGTIS.

1, *Subjects of Ava.* 2, *Silver Mine.* 3, *Munglung Kangtis.*

1.
Subjects
of
Ava.

The Bor-Kangtis are a numerous and powerful race, situated amongst the mountains whence the Irrawaddi takes its origin. They are under the Government of Ava, and supply a contingency to the Burmese army. Experienced Burmese Officers are constantly traversing their country for the purpose of drilling them, and inspecting their arms and ammunition. The capital of the Bor-Kangtis is Manchi, on a remote branch of the Irrawaddi: this place was visited by Lieutenants Wilcox and Burlton in 1827, by an overland route, across the mountains from Suddia. The journey occupied about 12 days: they were kindly received by the Bor-Kangti chief, who gave them every information about the sources of the Irrawaddi, and convinced them that from the smallness of the streams, it was impossible for any of them to afford a channel for the waters of the Sampu. The main stream of the Irrawaddi is there fordable, and not more than eighty yards broad.

2.
Silver Mine.

There is a silver mine in the Bor-Kangti country; but it has never produced more than 8,000 rupees a year. It might be turned to much more advantage; but the possessors are afraid of increasing its revenue, lest by doing so they should

excite the avarice of their neighbours. There are also mines of lead and iron in this country.

XIV.

HILL
TRIBES.

We have lately come into intimate contact with another tribe of Kangtis called Munglung; these, from dissension amongst themselves, and from the oppression of the Burmese, have lately dispatched about 200 of their tribe to stipulate for settlements in the British dominions, and report on the prospects of the country around Suddia. Should their report prove favourable, about 5,000 more have expressed their desire to emigrate.

SECTION VII.—SINGPHOS.

1, *Boundaries.* 2, *Chiefs.* 3, *Irruptions.* 4, *Wakum Koonjie's Invasion.* 5, *Bisa Gaum.* 6, *Duffa Gaum.* 7, *Caste.* 8, *Religion.* 9, *Language.* 10, *Marriages.* 11, *Funeral Rites.* 12, *Inheritance.* 13, *Intercourse with Burmese Singphos.*

By far the most powerful and the most formidable of these hill tribes are the Singphos; they are also the most numerous, and are scattered over the greatest extent of country. They are bounded on the north by the Lohit river, on the east by the Langtan mountains which separate them from the Bor-Kangtis, on the south by the Patkoi range, which divides them from the Burmese Singphos, from whom they are descended, and on the west, by a line drawn south from Suddia, till it meets the last mentioned mountains.

1.
Boundaries.

XIV. The Singphos are divided into 12 principal
 HILL tribes, each having its own Chief or Gaum; but
 TRIBES. every chieftain maintains his own separate independence, and seldom unites with any other, unless it be to punish some aspiring Chief obnoxious to them all, or in making plundering excursions upon neighbouring States.

2.
 Chiefs.

All the Chiefs have claimed our protection, though no tribute is exacted from them; with one or two exceptions, they have acted up to their engagements.

3.
 Irruptions.

The Singphos have, for several generations, been the terror of the wretched Assamese, and were in the constant habit of making irruptions into their country, sometimes as far as their very capital itself; of plundering their temples, laying waste their country, and carrying off the inhabitants into slavery. Since the British troops have had possession of Assam, these inroads have been prevented; but as might be expected, they are somewhat impatient of that restraint, and have once or twice endeavoured to resort to their old habits. To give an idea of the extent to which these devastations were carried on, the late Captain Neufville, received from the Singphos alone upwards of 7,000 Assamese captive slaves; and, perhaps, there are 100,000 Assamese and Manipuris still in slavery throughout the dominions of Ava.

4.
 Wakun
 Koonjie's
 Invasion.

About five years ago, a body of them amounting to about 3,000 men, armed with spears, daus, and a few musquets and jinjals, under a

Chief called Wakum Koonjie, made an advance against the station of Suddia, with the confident intention of carrying away in chains every Seapoy present, and of driving the British out of the country. This was a plot of three years' concocting, large stores of grain were accumulated in convenient depots, and shackles for ten thousand prisoners were all in readiness; but the whole force was shamefully repulsed by the then Political Agent, Captain Neufville, at the head of a handful of men of the Assam Infantry, and a few armed Kangti and Muamaria Militia, and driven in consternation into their hills. The Lubona Gaum only, of all the 12 Chiefs, took part in this irruption, and has taken an active hand in the late disturbances, headed by the Duffa Gaum.

XIV.

HILL
TRIBES.

The Bisa Gaum or Chief is a man of superior understanding, and was entrusted by the late Agent to the Governor General, the lamented Mr. Scott, with a good deal of confidence, and had an allowance from Government of 50 Rupees a month, as an organ of communication with the other Chiefs. The late Captain Neufville was also confident of his integrity, and made proposals to him to desert his own country, to live on lands to be granted him at Borhath and Jaipur, and allow his native hills to become a wilderness, and form a natural barrier against the incursions of the other tribes. He furnishes a contingent of about 100 men, and is supplied with arms and ammunition.

5.
Bisa Gaum.

The most influential of the unfriendly Chiefs is the Duffa Gaum. Only a few months ago

6.
Duffa Gaum.

XIV. he made a hostile incursion against our ally the Bisa Gaum, and massacred every man, woman, and child he could get near; the Bisa Gaum narrowly escaped with his life, and some of his own family were cut to pieces. After two or three skirmishes, the marauders were dislodged, and driven to their hills, by the force at Suddia; but the Duffa, instead of repenting of his atrocious act, and retiring to his home to await the consequences, commenced playing the despot in another quarter, threatening every one with his vengeance who acknowledged British protection, and even beheaded some who refused to conform to his will. A feud has, for a long time, existed between the Bisa and the Duffa Gaums, and the inroad lately made by the latter, admits of some palliation, as it avenged a similar one formerly made by the Bisa Gaum.

7.
Caste.

Rude as is the state of society amongst the Singphos, they are not without the distinction of caste; but are divided into Thengais, My-yongs, Lubrungs, and Mirups.

8.
Religion.

They have no religion properly their own, but have patched up a creed from amongst the superstitions of all their neighbours, and decorated their ruder temples with ruder idols of all religions.

9.
Language.

The Singphos are not a branch of the Shan tribes: tradition traces their origin to the confines of China or Thibet: the language is entirely different from that of the Shans, and is unwritten.

Poligamy is patronised, and every man keeps as many wives as he chooses, free women or slaves; and treats the offspring of both without partiality. Infanticide, in all its shapes, they abhor.

XIV.

HILL
TRIBES.10.
Marriages.11.
Funeral Rites.

It is the custom of the country to bury the dead. Those of the poorer classes are interred soon after death; but the Chiefs and principal individuals are sometimes not buried for years. The reason alleged for this consummation of the funeral rites is, to allow the widely scattered relations of the deceased to have time to attend, who would not fail to take deadly offence at their not being allowed an opportunity of paying reverence to the ashes of the head of their family. Not knowing the art of embalming, the body after death is removed to a distance from any habitation, till decomposition is completed. After that it is deposited in a coffin, and conveyed to the house of the deceased Chief, where it lies in state, surrounded with all the insignia the illustrious individual enjoyed when alive. When all the relatives have assembled, or communicated their not being able to attend, the coffin is committed to the earth, and a mound of clay, surrounded with a curious trellis-work of bambus, is raised to his memory. If the person has died a violent death, a buffalo is sacrificed as a propitiation to their deities, and the head is fixed to a cross, and placed near the grave; but, if he has died in the course of nature, no sacrifice is considered necessary.

According to the law of inheritance, the patrimony is divided between the eldest and the

12.
Inheritance.

XIV. youngest sons ; while any children that may intervene, are left to push their own fortunes as they best can. The eldest son succeeds to the title and the estate, while the younger carrying away all the personal and moveable property, goes in quest of a settlement for himself.

HILL
TRIBES.

13.
Intercourse
with
Burmese
Singphos.

The Singphos of Assam are separated from the Singphos subservient to the Burmese, by the Patkoi chain of mountains ; and though these two races are entirely unconnected with one another and independent, yet a constant friendly intercourse is maintained between them. The Burmese Singphos occupy a very extensive tract of country on both sides of the Irrawaddi, from the Patkoi mountains eastward to the borders of China.

SECTION VIII.—MUAMARIAS OR MATTUCKS.

1, *Extent.* 2, *Devastated Assam.* 3, *Rajah.* 4, *Doubtful Fidelity.* 5, *Capital.*

1.
Extent.

2.
Devastated
Assam.

The country of this tribe is bounded on the north by the Brahmaputra, on the south by the Buri Dihing, on the east by a line drawn south from the mouth of the Kunili nullah to the Buri Dihing, and on the west by a line drawn from the mouth of the river Diburu to the Buri Dihing. About 1793 these people rose in arms against the reigning Rajah Gourinath Sing, and after many bloody engagements with the Royal troops, at last succeeded in driving him from his throne and kingdom, and in appointing a successor of their own choice. During the period

of their ascendancy, they committed the most dreadful ravages upon the country, and the original inhabitants ; great portions of it were deserted, and even till this day, it has never regained any thing near its former prosperity. But these lawless plunderers were not allowed long to enjoy the fruits of their conquests ; they were speedily driven from the capital by 1,000 *Sipahis* under Captain Welsh, and retreated to the district which they now inherit.

The head of this still powerful clan is known by the name of the Mattuck Rajah, or more commonly, by that of the Bura Senaputti, (Great General.) During the Burmese War, he maintained his independence ; but on our taking Rungpore, he claimed our protection, and has since manifested his sincerity, by a zealous endeavour to render every assistance in his power in the advancement of our plans.

The Bura Senaputti, with all his affability and apparent deference to our authority, is by some considered not entitled to perfect and unlimited confidence. Situated between two powerful States, the British and the Burmah, his policy seems to be to maintain good terms with both ; and, in the event of another Burmese invasion, it is to be feared he would preserve neutrality, till he saw how the scale was likely to turn, and then join the stronger party.

The greater part of the country allotted to the Mattucks is a desert waste, and only the banks of the river Diburu are inhabited. The capital

XIV. HILL TRIBES.

3.
Rajah.

4.
Doubtful
Fidelity.

5.
Capital.

XIV. is Rungagora. The State is allowed about three hundred musquets and ammunition according to treaty, and supplies a large contingent. They profess the Hindoo religion; but act so little in accordance with its tenets, that enlightened Brahmins scarcely acknowledge them.

HILL
TRIBES.

SECTION IX.—NAGAS.

- 1, *Numerous Tribes.* 2, *Dreaded by Neighbours.*
3, *Dress.*

1.
Numerous
Tribes.

The next border tribes met with in proceeding westward are the Nagas; these tribes are very numerous, and may amount to thirty or forty, and are scattered along the whole mountain ridge between the Sylhet plains and Assam. There is very little unanimity amongst them; they are constantly at war amongst themselves, and each village is a sort of hill fort, either made so by art or fortified by nature.

2.
Dreaded
by
Neighbours.

They are the wildest and most barbarous of all the hill tribes, and looked upon with dread and horror by the neighbours of the plains, who consider them as ruthless robbers and murderers. Many of these hordes are located in Cachar and Munnipore, and are tributary to these States.

3.
Dress.

The Nagas go literally naked in their hills. They have however some singular idea of modesty, which consists of having a fold of the preputium drawn through a small ivory ring, and worn in that predicament. They would think it highly indecorous to appear in female society without this ornament. These rings are

sold in the bazars of Munnipore, all of which are kept by women ; and these ladies think no more about the matter in fitting a handsome Naga with this inexpressible, than they would his great toe with a ring.

SECTION X.—MUNNIPORE.

1, *Extent.* 2, *Valley.* 3, *Capitals.* 4, *Wars.*
5, *People.* 6, *Climate.*

Munnipore is divided from the Burmese empire on the east by the river Kyan-duang or Ningti, from Assam on the north by an imaginary line running east from the little river Dugang, and is bounded on the west and south by Cachar. The valley of Munnipore is not more than twelve miles in diameter, it is a perfect amphitheatre, and though elevated two or three thousand feet above the sea, is bounded by a chain of mountains, some of which are ten thousand feet high. This beautiful valley was formerly very populous and well cultivated, but it is now in a great measure left to nature, and overgrown with jungle and marshy swamps.

The ancient capital is now only known by ruined pagodas, clumps of large trees or mounds and ditches. Chundrapore is now the capital.

In 1774 A. D. Munnipore was conquered and plundered by the Burmese, and the reigning Rajah fled for safety to Cachar. In 1806 or 1810 (the former is probably the most correct date), the kingdom devolved upon Charjit Sing, who cleared his way to the throne by the murder of two of his elder brothers, while his two

XIV.

HILL TRIBES.

1.
Extent.

2.
Valley.

3.
Capital.

4.
Wars.

XIV. HILL TRIBES. younger brothers Marjit Sing and Gumbeer Sing, who appear to have shared in the fratricide, fled for security, the former to Ava and the latter to Cachar. Marjit, having obtained the assistance of the Burmese, returning to Munnipore, drove his brother Charjit from the kingdom, and was placed on the throne on condition of paying tribute to the Burmese. In 1819, Marjit, on refusing to attend upon the King of Ava as his liege lord, was dethroned, and retiring upon Cachar with 5,000 followers, attacked Govind Chunder, the Rajah of that country, and placed himself on his throne; Govind Chunder having been betrayed by Gumbeer Sing, who commanded a small force in his service. A sort of fraternal war was for some time carried on between the brothers for the sovereignty of Cachar, when, in 1823, our Government interfered, Govind Chunder was restored to his throne, and the Munnipore brothers pensioned. In 1825 the Burmese were driven from Munnipore, and Gumbeer Sing was restored to the throne of his ancestors; Gumbeer Sing died in 1834, and was succeeded by his son Kirta Sing, a minor, the present Rajah.

5.
Force.

In 1832 the standing force amounted to 300 infantry, 160 cavalry and 100^o artillery-men. These men get no pay, but grants of land are allowed them exempt from taxation. They are stationed in small detachments throughout the province, and when they are called into the field the crops are left to the women and children.

6.
People.

The Munnipooris are smart soldiers and expert horsemen; they have a large share of military

courage, and have more genius for war than most of their neighbours. They have broad Tartar features, though they profess to be Rajpoots; the women are coarse and masculine, and perform all the merchandise of the bazar.

XIV.

HILL
TRIBES.7.
Climate.

The climate of Munnipore is very different from what from its latitude might be expected; severe frosts prevail in winter, and the climate is cool and refreshing even in the hottest season of the year. Munnipore is drained by the Ningti river that falls into the Irrawaddi, and may be closely approached by conveyance on that stream. In this way the Burmese were wont to invade it. There are no carriage roads between Munnipore and Assam, but the natives have certain footpaths by which it is just possible to perform the journey.

SECTION XI.—CACHARIS.

1, *Extent.* 2, *Wars.* 3, *Royal Race extinct.* 4, *People.*

Cachar is bounded on the north by Assam, on the east by Munnipore, on the south by Sylhet, and on the west by Jyntea, and originally might contain an area of 9000 square miles. The ancient name of Cachar was Hairumbo, and Grobargé was the capital; the modern capital is Cospore. The river Barak is the principal line of communication on the south, the intercourse with Assam is maintained by the route already mentioned.

1.
Extent.

XIV. In 1774 Cachar was conquered by the Burmese and made tributary, and as a ratification of the treaty the Rajah was obliged to present to the King of Ava a virgin of the royal blood, together with a tree with the soil of the country adhering to its roots. I have already observed the usurpation of Cachar by the two brothers of Munnipore, and the settlement in favor of the deposed Rajah Govind Chunder. Unfortunately, he was not long allowed to enjoy the dignity, for, on the 24th of April, 1830, he was murdered by his own soldiers at the supposed instigation of Gumber Sing, Rajah of Munnipore. These soldiers were Munniporis.

HILL
TRIBES.

2.
Wars.

3.
Royal Race
Extinct.

The royal race of Cachar is now quite extinct. A great portion of the country is under British rule, the only remnant is now in the hands of a Hill Chief Tuliram, a soldier of fortune, and no relation to the reigning family.

4.
People.

The country of Cachar is now in a great measure deserted; large colonies have settled themselves in Assam: they are a quiet industrious agricultural people, and their services are in great request. According to some accounts the Cacharis were the aborigines of Assam, and retired to Cachar on the invasion of the Ahoms. The Cacharis profess to be Hindoos, but they pay almost no regard to caste; they live freely and fully on animal food and drink as much spirits as they can afford.

SECTION XII.—KASSYAS.

1, *Fierce Race of Men.* 2, *Massacre of Lieutenants Beddingfield and Burlton.* 3, *Habits.* 4, *Weather.*

The Kassyas, the most westward but one of the southern tribes, inhabit one continued tract of country from the plains of Sylhet to Gohatti, well known by the Kassya hills, and the Sanatarium of Chirra Poonji. The Kassyas are ruled by a number of petty Rajahs, all on pretty good terms, and forming a sort of republic. They are a powerful athletic race of men, rather above the middle size than below it, with a manliness of gait and nobleness of demeanour peculiarly their own. They are proud of their mountains, and look down with contempt upon the degenerate race of the plains; jealous of their honour, warlike and brave in action, and have a regard for their pledged word, and an aversion to falsehood, little to be expected from them. I have observed the mode the Kassyas use in carrying burdens, and of their having no aversion to take up an invalid upon a chair and trudge along with their load.

An anecdote is told of a kranny on duty on the hills, once obliging a Kassya of rank, his prisoner, to give him a ride, when the Chieftain avenged the insult by throwing himself, chair, kranny and all over a precipice and was dashed to pieces.

I wish I could say that treachery formed no constituent in their moral character, but the

XIV.

HILL
TRIBES.

1.
Fierce Race
of men.

2.
Massacre of
Lieuts. Bed-
dingfield and
Burlton.

XIV. indiscriminate and unprovoked massacre of
HILL Lieutenants Beddingfield and Burlton, and nearly
TRIBES. their whole party stands recorded against them. These two Officers, on a treaty being concluded for a free passage across the hills, and the establishment of a sanatorium within their country, were recruiting their broken health at Nunklow, when they were suddenly beleaguered; and though they defended themselves for some days with their fowling pieces, were eventually cut to pieces. To revenge these murders active operations were immediately put in force against them. Mr. Scott, the Commissioner, was several times closely beset, and the lives of all his followers were in imminent danger; Doctor Beadon was shot by an arrow that penetrated through the nose to the brain, and he died in excruciating agony; and, for some years after, the passage over the hills could only be effected by an armed guard. However, things are at the present day very much altered, a private individual may now travel across without danger or alarm, and the Sanatorium of Chirra Poonji now abolished has still the credit of having civilized the Kassyas, and thrown open that very interesting country, which without its institution would have remained unknown.

3.
 Habits.

The habits of the Kassyas are idle and independent, and their mode of living pastoral rather than agricultural; their houses are large and commodious, their cattle numerous, fat, and productive, and their pastures rich and abundant. Oranges, limes, cinnamon and several other fruits and spices are indigenous, the potatoe

is now extensively cultivated, and large quantities of the finest quality are transported to the plains for sale.

XIV.
HILL
TRIBES.

The highest point in the Kassya hills is believed to be Moplong, its elevation is about 6,000 feet, hoar frost is common in winter, and the thermometer does not rise above 70 or 75 in the hottest weather. The climate is moist, rough and boisterous, and probably better adapted for people in robust health than for invalids. A stormy west wind blows for a great part of the year, at a high elevation this west wind passes over Assam and restores the equilibrium of the atmosphere that would otherwise be disturbed by the prevalence of easterly winds along the course of the Brahmaputra.

4.
Weather.

SECTION XIII.—GARROWS.

- 1, *Dress and Dainties.* 2, *Women.* 3, *Ornaments.*
4, *Nature of Country.* 5, *Unhealthiness.*

I now come to the last of all these tribes—the Garrows, who occupy that triangular extent of mountainous country between the Kassya hills and the Brahmaputra. Like the Kassyas they too are divided into numerous petty tribes, each chief of which has his vote in the assembled council, though no one of them is independent of the others. They are equally warlike with the Kassyas, superior if possible in muscular developement and bodily strength,

XIV. though inferior to them in external appearance and dignity of carriage. The Kassyas are more pastoral, the Garrows more agricultural ; the Kassya lives by the produce of his cattle, the Garrow by the tillage of his hills ; the Kassya is content to eat the bread of idleness, the Garrow loves to live by the sweat of his brow.

1.
Dress and
Dainties.

The Garrows go, men, women, and children, almost literally naked, and lead a life as nearly approaching that of the savage as possible. A Garrow's greatest treasure is as many human skulls as his house can contain, his greatest cordial a pint of English brandy, and his greatest dainty a pudding made by feeding a young dog with as much rice as he can hold, and then roasting him alive till the rice is cooked, when the entire mass is served up for eating. It is a remarkable fact that the Garrows abhor milk as the greatest abomination.

2.
Women.

The Garrow women are amongst the ugliest pieces of female nature ; sturdy and masculine, yet as fond of ornament as the fairest of the daughters of Eve. But quantity seems to have more charms for them than quality, and they are delighted with loading themselves with rings and chains, and bells of solid brass, enough to break the neck of any lady in the country.

3.
Ornaments.

From ten to fifteen or more brass rings, as thick as a goose quill, and three or four inches in diameter, hang in the lobe of each ear ; by whose weight they are stretched so as to touch the

shoulder. The lobes being distended to a filiment eventually give way, and this is reckoned the consummation of all ornaments put together. It entitles the possessor to the envy of her own sex and the admiration of the others, and the lady moves with her torn ear, in the circle of her equals, with acknowledged superiority. One might suppose that the load in the ears might plead in apology for the neck's being free; but it also is cased in a mass of chains, proof against the hatchet of the executioner.

XIV.

HILL
TRIBES.

The country of the Garrows is one continued mass of hills almost without any level land, yet it is well cultivated and productive. Regular markets are held once or twice a week at convenient places along the borders. Cotton is the principal export; and, probably, an equal sum is expended at the markets in articles for home consumption.

4.
Nature of
Country.

It is very remarkable, that a country producing such a powerful race of men, should be so inimical to constitutions not inured to it. Above all jungly countries in India, that of the Garrows is, perhaps, the most fatal for a European to visit. Few, or probably none, have ever penetrated one day's journey into the interior, and escaped without a severe fever; and three-fourths of those, who have done so, have fallen victims to its baneful climate.

5.
Unhealthiness.

XIV.

SECTION XIV.

HILL
TRIBES.*Rabbas, Lalungs, Chooteas, and Mikirs.*

Besides the tribes on the south of Assam already enumerated, there are several others, which have no very fixed habitations: these are, the Rabbas, Lalungs, Chooteas, and Mikirs. Neither of them are numerous enough to have any Government of their own, and they attach themselves sometimes to one State and sometimes to another, as it suits their taste or convenience.

F I N I S.

A
S K E T C H
OF THE
Medical Topography
OF
B I S H N A T H,
AND ITS IMMEDIATE NEIGHBORHOOD;
WITH AN
ACCOUNT OF THE DISEASES GENERALLY
PREVAILING IN ASSAM.

BY
ASSISTANT SURGEON D. A. MACLEOD,
Assam Light Infantry.

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1837.

MEDICAL

Topography of Bishnath, &c.

BISHNATH, the head quarters of the Assam Light Infantry, is situated on the north bank of the Burrumpooter, in Lat. $26^{\circ} 39' N.$, Long. $93^{\circ} 12' 27'' E.$, and at an elevation above the sea of 202 feet.

Bishnath, its Latitude and Longitude, and altitude above the Sea.

It is distant from Gowalpara, the frontier station in Bengal, about 200 miles from Gowahatti, the principal civil station in Assam, about 120 miles from Terpon, the civil station of the north central division—32 miles and about the same distance from Rungagora, the civil station of the south central division—it is 80 miles distant from Somhauth, the capital of Upper Assam; and about 250 from Suddra, the extreme post on the N. E. frontier, and about 750 miles from Calcutta.

Its distance from Gowalpara, Gowahatti, Terpon and Nowgong, the Stations below it, and from Somhauth and Suddra above, also from Calcutta.

The station is situated on a bold rocky point, which jutting out into the river a short distance above, and as suddenly retiring below to the north, forms a considerable promontory of upwards of a mile in breadth. This promontory is again divided by a small nullah to the eastward, formed partly by the inundations during the rainy season, and partly by a small stream called the Booreegong Nuddee, which flows from the Duffalo hills.

General description of the site of the Station.

Bungalows
and public
buildings, of
what materi-
als composed,
with cost of
erection, &c.

On a high bank, chiefly composed of primitive rocks (gneis,) from 30 to 60 feet above the highest rise of the river, stand the bungalows of the European Officers, and the Regimental Hospital, having the lines of the Corps behind to the north, and the bazaar to the east along the banks of the small nullah.

The bungalows are constructed of strong timbers, having their walls made of a species of reed (Kugra,) covered outside with grass and inside with bamboo mats.

These houses, though inferior to the style of bungalows common in most cantonments, are nevertheless very well adapted to the country, as they can be erected within a month, or six weeks, at an expense of from two to four hundred rupees, and last with trifling repairs for three years; with the addition of glass windows and doors they form as comfortable a residence as can be desired.

Objections
to all the
buildings be-
ing of a tem-
porary des-
cription, and
the inconveni-
ences experi-
enced in con-
sequence.

Excepting the Magazine, which is built with bricks, and tiled, all the public buildings and Serjeants' houses are composed of the same materials. The principal inconveniences resulting from these temporary buildings are the necessity of renewing them triennially, and the difficulty often experienced of procuring workmen when most wanted, as at certain seasons of the year when engaged at home on their agricultural labours, the promise of three rupees a month is not sufficient to induce them to work, while at other times, they gladly accept

two rupees, but even at this apparently small rate, labour cannot be said to be cheap, on account of the trifling quantity performed by an individual during a day.

At Gowahatti some of the public buildings and officers' houses are built with bricks, and it is to be hoped in a few years, pukka* buildings may become common all over the country, as excellent bricks can be made at a trifling cost, the materials for their manufacture being everywhere abundant. Lime is at present procured at very considerable expense from Sylhet. Limestone is found a few miles above Suddra, but can only be got at in the cold weather when the river is partly dried up, as most of the stones are not much larger than a man's fist, and very round or oval; the Natives experience great difficulty in burning them in their rude kilns from their falling down and choking the fire.

Want of lime, the principal cause for there being so few pukka buildings, public or private.

The Regimental Hospital is a commodious building, capable of holding 80 patients, who are ranged on bamboo benches along the sides, upon which they place their usual bedding or mats; down the centre is an open space sufficiently broad to admit a dooly, and four people to walk abreast. One end is partitioned off, forming a medical store room and a place for the Native doctors, opposite to which is the guard room and a small apartment for the accommodation of Native officers who may wish to be in private: there is an eight feet verandah all

Hospital well adapted for the purposes required, situation high and dry, and close to the river.

* Buildings of burnt bricks or stone and mortar are called *pukka*, those of unburnt bricks and mud *kutchha*.

round, which is well adapted for the convalescents exercising themselves in, and for out-door patients, which it is often necessary to accommodate with a place in hospital to prevent their dying from exposure to the weather, and from absolute starvation.

It is a melancholy fact that to many of the persons whose lives have been thus saved, and supported for weeks on charity, not a few of the petty thefts on their sick neighbours' property have been traced, and in not a single instance has any of them ever shown the least gratitude for the attentions paid to them or given notice to the Native doctors of their intended departure.

In point of comfortable accommodations the sick are certainly well provided for ; the situation of the hospital is in every respect highly advantageous, being close to the river, and having the surrounding ground kept as clear and free from jungle as could be wished.

Burrumpooter, its rises and falls, its depth, velocity of its current, purity of its water, its breadth, best seasons for its navigation ; wind almost always blows down the river — storms come on with more regularity than in the Ganges, fewer wrecks in consequence.

The Burrumpooter in front of Bishnath, although considerably contracted by its banks, is never under 800 yards in breadth in the cold season, and a mile and a half, or two miles in the rains, although both above and below not far off extends in many places to the breadth of from three to five miles ; the average rate of the current has been computed at two miles an hour in the cold weather, and at four and a half in the rains. The water during the former period is very clear and free from impurities, but when the river rises it becomes excessively

muddy—it attains its greatest height usually in July and August, falling rapidly in September and October—from December to the end of March it is lowest; in April there are frequent rises and falls, and in May the rise steadily increases,—the average rise at Bishnath is about 35 feet, and the depth as measured by Lieut. Bigge on 26th October last, opposite cantonments, was from 3 to 5 fathoms, within 300 yards of either shore, and from 10 to 15 fathoms in the centre; these measurements were carefully taken with a regular sounding line correctly marked off, and at the time the river was at least 25 feet under high water mark. Every season new sand banks form, and the river is seldom or ever to be found running two years consecutively in precisely the same channels.

The best season for its navigation commences in October—there are seldom autumnal equinoctial gales: the shortest passages are made in the months of February and March, almost the only season of the year when westerly winds can be surely calculated on. In April and May storms are particularly prevalent towards the afternoon, and at night; although extremely violent they come on with such regularity and are usually seen at such a distance that, comparatively speaking, accidents and wrecks are of much less frequent occurrence than in the Ganges.

To the eastward of cantonments on the opposite side of the nullah there is an extensive

General description of the country in the

immediate vicinity of Cantonments, its uncultivated state possibly affecting its salubrity.

tract of reed jungle liable to inundation, which no doubt detracts materially from the salubrity of the place, but it unfortunately happens that no elevated situation in the country is without similar drawbacks.

On the north, and at the back of cantonments there is a tree jungle of considerable extent, partially cleared, which, it is to be hoped, may soon be brought completely under cultivation, as until such be the case it is doubtful whether it may not in its present state give rise to more noxious exhalations than if left unreclaimed altogether. There are at present not more than about 20 convicts available for clearing of jungle, and for keeping the roads and drains in repair, a number totally inadequate for the purposes required.

Behind this belt of jungle are the celebrated Bishnath plains of immense extent, formerly well stocked with game of all descriptions. A few years ago flocks of red deer, varying in number from 5 to 7 or 800, might always be seen ; now they have become more scarce, having retired to a greater distance inland where they are less liable to be disturbed.

Breadth of the valley of Assam opposite Bishnath.

The valley of Assam, opposite Bishnath, is said to be about 50 miles broad. The Duffalo hills behind being about 40 miles distant, and the Meekur hills in front eight or ten.

The Giant's Peak, estimated by Captains Jones and Wilcox at 21,000 feet high, and the

snowy range of the Himalayas are objects of admiration every clear morning throughout the year.

None of the neighbouring hills possess any recommendations as sites for a Sanatarium, the climate being remarkable for its changeableness, and access to them being next to impossible from the distance to be travelled through swamps and jungles, and from the being inhabited by fierce and treacherous tribes, highly jealous of the visits of strangers.

Neighbouring hills possess no recommendations as sites for a Sanatarium.

The Sudder Bazar at Bishnath consists of about 140 houses, containing from 6 to 700 inhabitants, the men of the regiment, camp-followers, &c., usually at head-quarters may amount to 1000, giving a total of 1700 persons.

Sudder Bazar—amount of the population.

The present site of the bazar is most wretched, cramped upon the edge of the nulla, the people are crowded together in a manner highly prejudicial to their health, and are sometimes for a fortnight together obliged to move about from house to house in canoes when the river rises very high; the Regimental Bazar being above high water mark, is not subjected to this inconvenience.

Its bad situation a probable cause of increase of sickness.

A more desirable situation on the west side of Cantonments is likely to be fixed on, but such is the apathy of the natives themselves, and the disinclination evinced by them to adopt any improvements even for their own benefit when attended with any expense however trifling, that

Causes preventing its immediate removal to a better situation.

the proposed transfer of the bazar cannot all at once be effected.

Description
of the houses
in the Bazar
and country
generally.

The houses in the bazar, and those all over the country, are made of bamboos, reeds, and grass, a few are plastered over with clay; those in low situations are raised several feet above the level, of the ground, with mud and clay, they resemble in size the huts of the corresponding ranks in Bengal, but none of them have the circular hog-back shaped chopper which is the favourite mode of the latter, and the villages and houses in general are so surrounded by dense jungle, that strangers unacquainted with the habits of the people, might pass close to a considerable village or collection of houses without ever seeing one of them; this singular custom greatly detracts from the thriving and cheerful aspect that many parts of the country might otherwise exhibit.

Principal
trade in the
hands of native
merchants,
inhabitants of
Marwar and
Ajmeer.

Almost all the trade of the country is in the hands of a set of merchants, called Razas, natives of the Marwar territory, who are dispersed all over the province and make advances either in money or salt to the villagers for the different products of the country. They are also to be found near all the passes from the hills, by which means they procure ivory, gold dust and other valuables in exchange for salt, muslins, chintzes, brass pots, &c. Their profits in this manner would be enormous were there not so many of them to be divided among. It is much to their credit that complaints for the non-fulfilment of their engagements are rarely brought

against them, while Bengalies, under similar circumstances, are considered as a curse wherever they settle themselves.

They convey their merchandize in enormous canoes called hoolungs, capable of containing from 40 to 100 maunds, they are admirably calculated for the river, as with five men they can be pushed along by bamboo poles at the rate of 8 or 10 miles a day, with tolerable certainty, when other boats make little or no progress during the rains, on account of the rapidity of the current, there being no tracking ground, and continued easterly wind which may be said to prevail for nine months of the year.

The late Dr. Leslie, from whose statistical report of Gohattie I have copied a table of the annual range of the thermometer during the day time, (having never kept one myself so correctly) justly observes—"The seasons in Assam may be divided into the cold and wet; for in April and May the rains commence with intervals of fine weather. During July, August and September the heaviest showers fall, but even in these months there are dry days, and the rain seldom falls for 24 hours without intermission and scarcely ever for two days."

Seasons, the division into wet and cold applicable to Assam.

The first approach of the cold weather is generally perceived about the middle of October, when the mornings and evenings become delightfully cool, but the sun during the day continues intensely hot, fogs now and then occasionally

come on and at a more advanced period from December till March, they are of daily occurrence, often not clearing off till 10 or 11 o'clock. November and March are I think the two pleasantest months in the year, as the heat and cold are then most comfortable to the feelings; in December, about Christmas time, and often in February, rain falls, causing a disagreeable sensation of cold, which is not indicated by the Thermometer.

Throughout the year the nights are tolerably cool, and perhaps with the exception of six or eight in a season, do not prevent people resting with moderate comfort.

The annual mean temperature by Doctor Leslie's report is 72° 86.

Table shewing the mean and extremes of temperature throughout the year.

January extremes	48° to 73°	Mean Temperature	58° 15
February ditto	48° to 80°	Mean ditto	60° 7
March ditto	52° to 90°	Mean ditto	72° 9
April ditto	60° to 90°	Mean ditto	74° 8
May ditto	60° to 92°	Mean ditto	76° 48
June ditto	70° to 91°	Mean ditto	76° 5
July ditto	76° to 88°	Mean ditto	82° 15
August ditto	74° to 91°	Mean ditto	81° 52
September ditto	70° to 90°	Mean ditto	81° 55
October ditto	67° to 87°	Mean ditto	77° 45
November ditto	58° to 81°	Mean ditto	71° 0
December ditto	49° to 73°	Mean ditto	61° 98

By the above table the extreme range of thermometer at Gowahattie appears to have been from 49° to 92°, but at both Bishnath and Somhauth, although not able to give the dates, I have more

than once seen the thermometer point at 45° and 98°.

With regard to the climate of Assam great difference of opinion exists, some affirming that in point of salubrity it is on a par with any in Hindoostan, or at least Bengal, while others judging from their own cases, describe it as realizing in its deleterious nature the reports they had already heard, of its resembling closely that of Arracan.

Climate neither so good or so bad as it has been represented, but better than could be expected.

As is usual in most cases when great differences of opinion are entertained, the truth lies between the two extremes.

The climate in reality is much better than could be reasonably expected judging from the general appearance of the country when the elements of malaria such as extensive marshes, deep jungle, and rich alluvial soil liable to inundation, every where abound, added to which the moist and warm state of the atmosphere, of itself said to be the medium in which miasmatic influence acts most injuriously on the human frame, lead one to anticipate the frequent occurrence of such diseases as are usually prevalent under similar circumstances, which is truly the case in Assam as will afterwards be shewn when noticing the prevailing diseases of the province.

During five months of the year, from November to April, and in very healthy seasons, the latter half of October and part of April may be

Seasons of the year when military operations can be conducted with safety.

included, active operations may be carried on in the field in most part of the country by either Europeans or Sepoys with comparative impunity; but as it frequently happens from unforeseen and unavoidable circumstances, that military operations are sometimes necessarily undertaken in the rains or not completed within the proper time, the most melancholy effects result, few if any escape attacks of fever of the most dangerous type, often proving fatal within 3 and 4 days, leaving those who escape with their lives miserable sufferers for years from a complication of diseases and an annoying tendency to relapses from the slightest exposure.

These remarks more particularly apply to the diseases contracted in the neighbourhood of the hills and passes into the country, which unfortunately are the usual scenes of military operation.

Circumstances under which good health may be enjoyed.

Europeans, or natives, in comfortable circumstances, whose employments do not oblige them to be much exposed to the vicissitudes of climate or to travel through uncultivated parts of the country at unhealthy periods of the year, usually enjoy excellent health, provided they did so previous to their entering the country, but I have seldom known a case of a delicate subject continuing for any length of time in the province without complaining of a sensation of languor and debility, such as he never experienced in Upper India, where the range of the thermometer attains to so much a greater height.

Another characteristic of the effects of climate equally applicable to Europeans as well as the Native Soldiers is the extreme tediousness of convalescence, and tendency to relapses that exist in many cases after severe illness,—caused no doubt by mental depression, great desire to leave the country, the want of a succession of novel and exciting objects, change of scene, &c., and from their continuing probably under the influence of the predisposing cause of complaint, which however desirable to be avoided, cannot always be accomplished.

Tedious convalescence a characteristic of all severe illnesses, its causes attempted to be pointed out.

European children thrive remarkably well; the chief disease they are annoyed with is worms, which often induce attacks of fever and bowel complaint, from which they speedily recover on the expulsion of the exciting cause.

The soil in the neighbourhood of Bishnath, and indeed all over the country, may be said to be very rich; it is commonly of a clayey nature and in many places consists of a rich black loam—the immediate vicinity of cantonments being high ground is not celebrated for its rice crops, but is admirably adapted for the production of wheat, sugar cane, Indian corn and potatoes, &c.

General character of the soil and produce best adapted to it.

The agricultural productions of Assam are nearly the same as those of Bengal—rice, opium, Indian corn, kullai, mustard seed, sugar cane, and it is to be hoped in a few years, tea and coffee may be added to the list. Although sugar cane grows luxuriantly, the natives of the country make no other use of it than converting it into

Agricultural productions much the same as those of Bengal.

goor. Serious doubts I have heard urged against its containing a sufficiency of saccharine matter to make it a profitable speculation, and that the dampness of the climate might possibly prevent its manufacture into sugar altogether—the latter objection is also urged as to the probability of coffee ripening, but I have tasted the produce of a few bushes reared in a garden with the quality of which I was perfectly satisfied.

Climate of the tea country very bad for 8 months of the year.

The tea plant is found in a part of the country where, excepting in the cold weather, it rains almost incessantly; the greatest inconvenience to be dreaded from its culture is the mortality likely to ensue among the workmen, as assuredly for many years to come none but the wild tribes about the place have sufficient stamina to withstand the noxious nature of the climate during 8 months of the year,—but if the present experiments succeed and the jungle gets cleared away, this objection will gradually be overcome.

Horticultural productions.

All the Europe vegetables usually grown in India thrive here very well, and in the native gardens may be seen ginger, long pepper, turmeric, capsicums, garlic and tobacco in great perfection. Oranges, limes, peaches, pumaloes, jack fruit, pine apples and mangoes are all procurable in abundance when in season. All the orange species are of the finest quality, but the mangoes are seldom good, and few are found that are not already half eaten by a species of beetle with short legs, the size of an ordinary English spider. The peaches also are seldom fit to be used excepting in tarts—many of them

Fruit much destroyed by a species of beetle.

rotting on the tree before they are ripe. Pine apples are very good, but they also are subject to the attacks of large beetles that very soon destroy them.

The most destructive of all insects however is a small beetle not much larger than a flea which destroys rice and wheat in large quantities if kept above three months; in consequence of their ravages it is necessary to keep the rice in husk, under which circumstances with care it may be preserved for several years.

Grain after three months keeping liable to similar destruction.

The natives prefer all fruits in the green state, when they eat them with salt by way of a relish.

Peculiarity in native taste with regard to fruit.

The breed of cattle is very small and give little milk, they cost from 3 to 6 rupees each. The oxen and bhangies (barren cows) when fat make excellent beef,—many of the calves die before reaching maturity,—cattle are occasionally subject some years to a species of dysentery that carries them off in great numbers—the only other complaint I have observed them liable to is an ulceration and swelling of the feet in the rains which often contain maggots and causes the loss of the hoof; from this cause they sometimes die: the natives treat the complaint with applications of lime and tobacco to kill the maggots, and sometimes bind the limb up in hot sand with good effect.

Domestic animals, their value, diseases they are liable to, with native mode of cure.

Buffaloes are plentiful; males are often employed in ploughing new ground, and are worth

from 10 to 12 rupees ; females sell for 20, 25 and 30 rupees.

Horses thrive very well, the common ponys are wretched creatures,—the better classes supply themselves with Bootan tanghans, which they buy from 30 to 50 rupees ; an officer however can seldom procure one worthy of purchase under 80, and often as high as 120 rupees. Sheep and goats thrive well, the former are always procured from Bengal, no native ever keeps them ; the latter, with a little trouble in procuring them from a distance, are cheap and plentiful. Poultry are exceedingly scarce in the neighbourhood of Bishnath, where, from some local peculiarity, they are subject to an epidemic disease which carries them suddenly off and in great numbers, elsewhere this is not found to be the case.

Local peculiarity of Bishnath, where Poultry are liable to a fatal epidemic.

Fish, when procurable, the different kinds held in most estimation.

In the cold weather fish are very plentiful and cheap, in the rains scarce ; those held in most estimation are the rooie, mirga, cutla and pufta.

Wild animals common in the country.

Of wild animals Assam contains many more than its due share,—the most formidable are elephants, rhinoceroses, buffaloes, tigers, bears, leopard and hogs,—the smaller game worthy of notice are deer, hares, florikan, jungle fowl, partridges, snipe, and every variety of wild fowl.

Assam elephants under-valued,—the

The Assam elephant is generally supposed to be less hardy than those of Chittagong, from

many of them having died when newly caught and exported from the country ; this prejudice against them will wear off as they become better known ; in point of courage they cannot be surpassed, in appearance perhaps they are not so handsome as those brought from Chittagong, having in general smaller heads and a blown out appearance about the belly, solely attributable to the nature of the food they feed on. The usual mode of keeping them adopted by the natives is, to tie their fore-legs and leave them in the jungle during the night to partake of whatever most suits their taste.

reasons why—
their good
qualities and
usual price.

The price of a good sporting one now varies from 3 to 500 rupees, the same animal, when newly caught, may be had for about 120 rupees,—it is considered past all danger when it has survived its capture three years,—a great majority of those which die, do so within the first six months,—great damage is committed on the crops, as may be easily conceived when visited by herds amounting to two and three hundred of them.

Tigers are very numerous, and in the wilder parts of the country where cattle are scarce, kill many of the people,—the average annual casualties by them and buffaloes in a single district, varies from 50 to 80 and 100,—many of those wounded also recover after sustaining wonderful injuries.

Tigers, numerous casualties caused by them.

The only mineral productions I am aware of as existing in the country are gold, copper, iron, lime and coal.

Mineral productions.

Gold.

Gold is found in much less quantity than is generally supposed, few people now make a livelihood by washing for it, which is the more remarkable as no extra revenue is now exacted from them as in former times, when they paid thrice as much as their neighbours, besides being robbed of the fruits of their labour by the Raja and people immediately over them, which would not now be the case.

In former days no doubt it was very plentiful, when large numbers of people were forcibly employed by the Raja and rich nobles in search of it; but now no coercion being allowed, and the people having a very great aversion to hard work, which gold washing is, never think of having recourse to it, excepting when driven to it by necessity.

The Singphos and other hill tribes bring it down to Suddra in small quantities—that now found in the bazars is the produce of former years—the remains of what escaped the ravages of the Burmese, who desolated the country previous to its falling under British rule in the year 1824.

Copper.

Native copper I have never seen, but it is brought down occasionally by the Abbas, who are such troublesome people to deal with, that their visits to the plains are not much encouraged.

Iron.

Iron is found and worked in Upper Assam; its quality is soft, but very good—it is usually

sold in the bazar ready made up in the shape of a native spade used as a hoe.

The only shape limestone has hitherto been discovered in has already been mentioned, found as small round and oval stones washed down from the mountains.

Limestone.

Coal has been found at the bottom of the Naga Hills near Rungpore, on the banks of a small river, full of rocks and water-falls, which makes its transport exceedingly difficult. 1000 maunds were once dug out in the year 1828, half the canoes employed were swamped on their return with it, and the Gentleman who superintended the operations and all the workmen employed, suffered more or less from attacks of fever and ague.

Coal.

Agriculture is carried on in precisely the same slovenly manner and perhaps more so than in Bengal, no improvement in this respect having been adopted for centuries; with the exception of ploughing, the remainder of the work is left almost entirely in the hands of the women.

State of Agriculture, roads and ordinary modes of carrying produce to market.

Wheel carriages are no where in use excepting under the direction of Europeans, and although their usefulness is apparent to all who behold them, there is no appearance yet of their adoption by the natives, who have been so long accustomed to carry the produce of their farms, either on their heads or in baskets with a pole over the shoulder, and by water in canoes;

that they are not likely to be generally adopted until the state of the roads throughout the country is improved. The roads in the neighbourhood of the several Stations are all excellent, but in the country are mere foot-paths, and the old grand bund roads are, in many parts, either much broken or over-run with jungle, neither would the expense and trouble of putting them in order, be rewarded by any corresponding benefit until the population and general traffic of the country greatly increase beyond what they now are.

Country so intersected with nullahs and swamps, generality of roads not available throughout the year.

The country is so intersected with nullahs and swamps that, for six months of the year, the chief communication between distant parts must always be by water, for which purpose the country canoe is admirably calculated.

State of the useful arts, their backwardness.

The useful arts, as might be imagined, are in rather a backward state. Gold and silver-smith's work looks very well at a distance, but cannot bear close inspection; the same may be said of the labours of the workers in ivory, in wood, iron and brass; the workmanship is somewhat of the roughest, but good enough for the purposes required. All artizans whose pay is better than that of common coolies, are invariably dissipated characters, constantly under the influence of opium, and if left to themselves would dose away three-fourths of their time, and work out the remainder with very bad grace.

Principal castes, with their common employments.

“ The Assamese tribes may be enumerated
“ as Brahmens, Koleetahs, Quoits, Jogeas,

“ Dooks, Koomars, Heerahs, Rochs, all profess-
 “ ing some corruption of the Braminical faith.
 “ The Robuhs and Cacharies are distinguished,
 “ more especially the latter, by their strength
 “ and industry,—they are supposed to be des-
 “ cended from hill tribes, are fond of good living
 “ and somewhat given to excess. Besides those
 “ just enumerated, there are several less im-
 “ portant sub-divisions—all are husbandmen, but
 “ the Jogeas also wean and breed silk worms ;
 “ the Dooks are fishers, and Koomars fashion
 “ earthen vessels.

“ The highest class, the Ahom, to which the
 “ Royal family and all the old nobility belong,
 “ are the descendants of the conquerors of As-
 “ sam in the 14th century, who came from
 “ the Eastern country bordering on China,
 “ they form a limited class and profess Hin-
 “ dooism.”*

The descendants of the Mussleman invaders during the reign of Aurungzebe, are termed Gooreahs, they profess Islamism ; tailors and shop-keepers generally belong to this class.

General cha-
 racter of the
 Assamese.

The character of the upper ranks generally is, I fear, not so good as it ought to be ; they oppress all under them excepting their own domestic slaves, to whom they usually are very kind ; they are not as yet such adepts at intrigue and cunning as Bengallee Aumlah, but are making rapid progress in these acquire-

* Dr. Leslie's Medical Topography of Gohatti.

Their great
immorality.

ments : few of the present race of Ahums can read or write very well, but all the rising generation are perfecting themselves in these accomplishments. In point of morality the upper class shew a deplorable example which the lower orders do not fail to imitate. In no other country that I am aware of, do the women take the same active lead in dissipation ; they are as much addicted to the abuse of opium as the men, and in all cases where Bengalees and Hindoostanees associate with them, they never fail to be initiated into the practice.

Obscenity of
their songs and
dances during
the Hoolee.

The obscenity of the songs and dancing during the Hoolee, requires to be heard and seen to be believed.

Former war-
like character
not now appli-
cable to them.

In ancient times the Assamese were considered a warlike race, but at present it is doubtful if their martial ardor excels that of the Bengalees ; yet this does not altogether arise from want of personal courage, as I have seen them in many instances attack tigers, buffaloes and other wild animals in such an open and fearless manner, that few Europeans would choose to follow their example. .

Their quali-
fication as
house servants.

The boys of the country make excellent household servants until they reach the age of 18—the natural depravity of their natures then breaks forth, and they find it difficult to support themselves on 4 rupees a month ; should the luckless master consent to give more, the work is then done by deputy, a younger brother or acquaintance performs it in reality, while the

other would wish to sleep all day after his debauches at night.

Good Hindoostanee servants object to come to or remain in the country, but after a year's residence they are loath to leave it, and sooner or later become as lazy as the Assamese themselves.

Hindoostanee servants dislike the country at first, afterwards never wish to leave it.

The upper classes are fair and good looking when not disfigured by the effects of dissipation ; the women too are very handsome, but the better class are kept much out of sight.

Appearance of the upper classes.

Poligamy is practised in all cases when it can be afforded ; and in many instances when it cannot. The proportion of females to males appears to a casual observer to be as three to two, although in reality they must be nearly equal ; the number of children in a family is usually from 4 to 8, but on this subject, as well as on the interesting ones of revenue prospects, the diminished prevalence of crime, and the improvements now in progress for encreasing the resources of the country, full and ample information from authentic documents are constantly given in by the proper local authorities.

Poligamy generally practised.

Correct information on the state of crime, improving resources of the country, &c. given in by the local authorities not here alluded to.

The Assamese generally speaking do not attain a great age, few old men of 60 and 70 years are to be seen, the shortness of life is as much attributable to early dissipation as to the effects of climate, and taking both together into consideration, it is really surprising they live so long as they do.

Longevity ; the probable cause of its being so rare.

Diseases.

The prevailing diseases of the country are fevers, bowel complaints, cholera, small-pox, verminous diseases, scurvy, ulcers, venereal and cutaneous complaints, rheumatism, enlargements of the spleen, goitres, elephantiasis and leprosy.

Fever.

When contracted in cantonments often slight.

Fevers among the natives and sepoys are exceedingly common between the months of June and October, those contracted in cantonments are often very slight; the exhibition of a single emetic or purgative with abstinence from food is sufficient to effect a cure, and many of the inhabitants of the bazar recover without taking any medicine at all.

When contracted near the hills invariably of a dangerous nature.

Far different however are those malignant remittent fevers contracted in the neighbourhood of the hills or in jungly parts of the country, or where the patient has been exposed to privations and fatigue without medical advice at the commencement of his illness; they are attended from the beginning with great prostration of the vital power and local congestions, especially in the head and stomach, causing either common delirium or great irritability of the latter organ: a very large proportion of these cases prove fatal. Such as recover generally require change of air, either to enable them to regain their strength or get rid of an obstinate ague in which it often terminates.

Treatment.

Mercurial purgatives and local depletions by leeches at the commencement of the disease, followed up with counter-irritants and tonics,

were the most successful means of cure had recourse to.

Continued fever is of extremely rare occurrence, generally passing speedily into a remittent type—remittents become intermittents, and quotidians pass into tertians—tertians into quartans, and vice versa, although not so frequently.

Continued fevers soon assume the remittent type.

Quotidians are by much the most numerous and easy of cure, and next to them tertians—quartans, though not unfrequent, are of rarer occurrence as a primary affection—and it is astonishing the length of time patients labour under them without suffering much in appearance, loss of flesh, or otherwise; a change of air alone in many cases effects a cure after all medicines have failed. The beneficial effects of the change are generally immediately experienced by Up-country sepoys after passing Bugwaghat near Rungpore. While such is the gratifying result observable in their cases, the very opposite effect is experienced by natives of Assam or even Bengalees assimilated to the climate; in leaving the province they seldom escape attacks of fever or dysentery which often prove fatal. Hence the aversion of the people to leave their country.

Change of air effects cure when all Medical means fail.

Favorable change often apparent immediately on quitting the province.

Agues in general readily yield to the usual means of treatment when seen early, but it unfortunately happens this is not always practicable, and when complicated as old cases always are with enlargements of the spleen, dropsical effusions, diarrhæa, dysentery, or pain-

Agues when early seen usually prove tractable.

ful affections in the bones and joints, the cure is tedious and but too often hopeless, especially at the commencement of the cold weather, when they are carried off in great numbers by dysentery.

It is no uncommon occurrence for agues ushered in with great severity, not to be succeeded by a second attack, or by a very mild one; while on the other hand some of the most harassing cases commence very insiduously, proving obstinate in the extreme.

A few days hot weather, after a short continuance of rain, never fails to produce numerous cases of fever.

Blood-letting in ague, not a favorite, though often a successful, remedy with natives.

Blood-letting in the cold stage was frequently practised in strong subjects with almost always very good success—but it is not a remedy natives are fond of submitting to under these circumstances—even some who had benefitted so much by it, preferred in subsequent illnesses, deferring it until other remedies were first tried.

Dysentery the most fatal of all diseases.

Dysentery is the disease that carries off more victims than almost all the others put together; as an acute affection in an otherwise healthy subject, it is not more fatal than elsewhere, and very few sepoys thus affected die of it—but in men of broken-down constitution, from dissipation, or other complaints, chronic and scorbutic dysentery almost invariably carries them off—especially towards the commencement of the cold weather—indeed every disease of long con-

tinuance has a tendency to terminate in this manner.

As in other countries the poorest and lower orders of the people are the chief sufferers, the deficiency of food and clothes, the bad quality of the food—such as stale fish, cold and indigestible fruits and vegetables—in many places bad water from the neighbouring puddle, the want of the accustomed stimulus of opium which nearly all take when they can get it, the very sudden changes of weather and wearing wet clothes account for the prevalence of the disease and for its great mortality. Such as rally and recover under even these circumstances often fall victims to relapses brought on by their own carelessness and total disregard of all warning and advice.

Causes for
its prevalence,
and why so
fatal.

Opium-eaters are much more liable to the disease than those who do not partake of it, and a much larger proportion of them die. The truth being that, in order to procure the drug, they often sell every thing they possess, and poverty alone, from its depressing influence over both mind and body, renders them liable to all diseases arising from debility. Hence the chief mortality in the jails takes place among the poorer prisoners. Men confined from 6 to 12 months for petty thefts—whose constitutions from this cause are already in many instances previously undermined—while the stouter men, such as Dakoits, imprisoned from 3 to 14 years, escape with comparative impunity, and indeed grow fat on their prison fare, which in many

Opium eat-
ers the great-
est sufferers,
the greatest
mortality
occurs among
them.

cases is better than they were ever before accustomed to.

The propriety of serving out opium to prisoners, advocated by some as a prophylactic measure, objected to.

Some philanthropists urge the propriety of regularly serving out to the weakly prisoners an allowance of opium, as well as to keep them in health, as with a view to expedite their cure when ill, or convalescent—but if such be ever allowed in Assam, it will hold out such an inducement to crime, and rogues will fare so much better than honest men, that I should dread its speedily filling all the district jails, and eventually incurring great additional expense to Government.

In cases where illness was fairly attributable to this cause, and they are of very frequent occurrence, opium was invariably given in combination with other ingredients, which did not however give the same satisfaction to the patients, who, while calling out for Kanee, their own preparation of it, were not aware they were daily swallowing very considerable quantities of the drug.

The probable good effects that result from distributing an allowance of goor and lime juice in the Jails.

As there is a scorbutic diathesis very prevalent in most of the jails, a small and regular allowance of lime juice and molasses, both produced in the country and cheap articles, if served out would materially tend to benefit the health of the prisoners generally, and never as in the other case prove the slightest temptation for individuals voluntarily to get themselves committed.

Local depletion by leeches, occasional mild laxatives, ipecacuanha with bitters, and in the later stages astringents, aromatics and opiates were the means employed, which afforded most relief.

Treatment
of Dysentery.

Occasional cases of cholera occur annually, and on an average it appears epidemically every fourth year; thus in 1825 it raged with uncommon mortality among the troops, then on service re-taking the country from the Burmese. Again in 1829 many thousands of the inhabitants in all parts of the country were carried off by it, and it re-appeared with considerable virulence in 1833 and 1835, but not to an equal extent as during either of the former epidemics.

Cholera
rages epide-
mically on an
average every
fourth year.

When this scourge visits the country several circumstances contribute greatly to encrease the mortality attending it. The fatigue and want of rest endured by the inhabitants consequent on their assembling in numbers, and sitting up for many nights in succession singing, beating drums and cymbals, &c. by way of pooja to avert the calamity, no doubt frequently induces it.

Causes pro-
ducing an en-
crease of
cases and of
mortality.

Also the loss of time allowed to elapse in their vain attempts to effect a cure, and in applying for medicines even when within their reach, and the inhuman practice, that is but too common, of thrusting the patient out of doors long before all hope of recovery is over, to prevent the possibility of his dying inside the house, by which means it would be defiled.

Such as have friends are pretty carefully looked after, and are only removed when all hopes of amendment are gone, but when the sufferer is not with his own family, he is speedily put outside, left to himself accommodated with a plentiful supply of water, of which he drinks immoderately—few under these circumstances can be expected ever to survive.

Epidemic cholera has hitherto always come from the west, and has never raged epidemically at Suddra.

It has been remarked, that epidemic cholera always comes from the west, and the probable date of arrival at Bishnath after being first heard of at Gawalpara, the frontier station of Bengal, distant about 200 miles, is from a month to five weeks, and from Gowahatti, 120 miles off, from fourteen to twenty days, proceeding upwards to Jorehauth at the same rate—spreading more rapidly along the banks of the river than towards the interior.

In none of the epidemics did their influence extend to more than 50 miles above Jorehauth, having apparently exhausted itself in the boundless tracts of almost uninhabited jungle that intervene between it and Suddra, the frontier station. The correctness of these remarks I have seen thrice verified during the epidemics of 1829, 1833 and 1835.

Small-pox raged in 1832.

Many of the inhabitants shew marks of having had small-pox—but I never saw a case of it in a ten years' residence in the province, excepting in 1832, when it raged with uncommon virulence from February to end of July. The mortality caused by it throughout the

country was very considerable, and ten out of thirty-two cases in the Regimental Hospital proved fatal.

Of these thirty-two cases eighteen were attacked with the simple form, though many of them had severe fever and a copious eruption, all sooner or later completely recovered. Of five cases of the confluent small-pox, one died and four recovered, they were all reduced to a very low state, but eventually did well after being detained in hospital many days; in several ulcers formed which bled largely—and notwithstanding the greatest attention to cleanliness—maggots were produced in these ulcers in great numbers.

The remaining nine casualties were caused by an anomalous variety, more resembling measles than small-pox. These cases were attended from the beginning with severe fever and tendency to coma. The face in all of them was much swollen. There was a copious discharge from the nose and eyes—and of viscid saliva from the mouth, ejected with great difficulty—there was great oppression of the chest—burning sensation of the stomach and pain in the back and loins—the eruptions never proceeded further than small elevated dots similar to mosquito bites—the tongue was enormously swollen and deglutition towards the close of the disease became impracticable, death took place between the fifth and eighth day—not one recovery occurred among any thus affected—to a casual observer their general appearance was less

Anomalous
and fatal variety
more resembling
measles than
small-pox
described.

loathsome than many of those labouring under the simple variety.

Treatment;
its total want
of success.

The same treatment that succeeded so well in the other cases—free purging and exhibition of mineral acids at the commencement, and tonics afterwards, had not the slightest mitigating effect in checking the disease, neither in subsequent cases had bleeding and applications of blisters any better result. In like cases among the natives, when little or nothing was done, the complaint went through a precisely similar course towards a fatal termination.

Inoculation
practised
chiefly by
Brahmins and
among their
own class.

Inoculation is practised by Brahmins, but is almost confined to their own class, among whom the operation is performed without fee; but if practised on others a heavy expense is incurred, which the generality of people, in the absence of immediate danger, are by no means anxious to subject themselves to—and few ever availed themselves of the offer of vaccination made by me, not that they had any particular objection to it—but saw no reason to be in a hurry to comply with what they imagined was granting a favour instead of obtaining a lasting benefit.

Prevalence
of verminous
diseases.

Verminous diseases are exceedingly common, as might be expected in such a low country, where the inhabitants live almost entirely on a vegetable diet, and when the poorer classes do not every day enjoy the luxury of common salt, substituting for it a substance they call khar, an impure carbonate of potass procured

from the ashes of burnt plantain tree—even the better classes use it occasionally along with salt, affirming it promotes digestion and partly destroys the effluvia of tainted meat and fish, which they contrive to eat in a horrid state of putrefaction

The salt sold usually in the bazar contains one-third of river sand, even honest dealers acknowledge their being unable to sell the pure ingredient at a small advance in price. Lumbrici are the species of worms most commonly met with. I have seen as many as 25 ejected from the stomach by one emetic, and have heard of 40 and 50 being passed by stool after an active purgative. Lumbrici crawling out of the mouths of children when asleep, is quite a common occurrence. Ascarides are less frequent, but sometimes met with.

Scorbutus is frequently seen chiefly among the lower classes arising from deficiency of nutritious food — exposure to wet and cold, &c. associated with dysentery, which it frequently is, it proves fatal to great numbers.

Scorbutus,
the classes
whom it chief-
ly affects.

Tall up-country sepoy who have been accustomed to live on attah, after a few year's residence in Assam, are prone to this complaint, and soon become next to useless as campaigners in the jungle ; while they complain that rice does not afford them sufficient nourishment, they at the same time confess they can only indulge in their favourite food attah twice or thrice a week,

from its causing a sensation of heat, indigestion, and sometimes diarrhœa.

Cutaneous
affections.

The same causes that produce scurvy, render cutaneous affections extremely common, the natives of the country seldom apply for medicines on this account, but sepoys often suffer great inconvenience from them when pustular eruptions break out about their loins and inside of the thighs, preventing their wearing their clothes and accoutrements.

Under a short course of purgatives and external applications, containing sulphur and borax, they disappear in a few days, but frequently return after a longer or shorter period.

Ulcers common in the
jails, less so
among the
Troops.

Small ulcers in the legs are commonly met with in the jails during the rains ; they sometimes speedily heal up and break out in another part ; their usual commencement is as a small boil, the persons so affected are often otherwise out of health, and as it improves, and the cold weather sets in, the sores heal up ; they do not often degenerate into large ulcers. Jail patients with this complaint, require to be narrowly watched, as nothing is more common than for them to apply irritating substances to the sores, preferring the rest and quiet in hospital to healthful exercise on the roads.

Treatment.

The moderate use of laxatives, tonics, and nitric acid internally — and stimulating local applications seemed to be the readiest mode of cure.

Sepoys are not much troubled with these small ulcers, but suffer a good deal during the rains from ulcerations between the toes which often cause considerable pain, swelling and constitutional derangement, portions of the thick skin from the soles of the feet come away, and the patient may be unable to walk for a fortnight or three weeks, poultices are often necessary at the commencement to allay pain, and afterwards absorbent powders, burnt alum—balsam of Peru is an excellent application in all such instances. In slight cases and healthy subjects, rest and attention to cleanliness soon effects a cure.

Ulcerations between the toes, a troublesome complaint, sepoy more liable to it than natives.

The Assamese are not often attacked in this manner.

Sympathetic buboes in the groin and armpits are also common, and often suppurate from not being seen in time—it is difficult to account for their great frequency, as they are often met with among the young and vigorous as with those bearing marks of a scrofulous habit.

Sympathetic bubos very common and difficult to be accounted for.

When seen early, they quickly disappear under the use of leeches and cold lotions, but in many cases they have proceeded too far towards a state of suppuration to prevent its taking place. Now and then they assume an indolent state, requiring the use of blisters and mercurial frictions. The natives of the country are less liable than sepoy to this complaint.

Venereal complaints and gonorrhœa are prevalent at all the stations—the natives say the

Venereal complaints and gonorrhœa.

former first became common soon after the Burmese invasion in 1818, and the name they gave it (Maunghao;) Burmese sore, seems to confirm the truth of their assertion; the most lamentable cases of secondary syphilis may be constantly seen, and the wretches labouring under it have seldom patience to undergo a proper course of medicine, although in many cases they have been furnished for this purpose with food, clothes, and lodgings by charitable friends.

In the Regimental Hospital a gentle alterative course, with sarsaparilla in these cases, was always gone through.

From the relaxing effects of climate the cure of gonorrhœa is extremely difficult—the most trifling errors in diet, riding on horse-back or on elephant, are sufficient to cause a relapse after a fortnight or three weeks apparent cure; this tendency is less apparent in the cold weather, when such cases do well.

Rheumatism, its chief peculiarity, its intractability seldom yielding to any thing but change of climate.

Obstinate rheumatism, though a rare complaint with the natives, is by no means so among the sepoys and other foreigners living in their country. It frequently follows attacks of fever, venereal, and from the effects of cold—its chief peculiarity is its remarkable obstinacy, seldom yielding to any mode of treatment from whatever causes it may have arisen—patients who have for months undergone every variety of means for effecting a cure with but partial benefit, always recover by change of air for a few months.

Enlargements of the spleen, consequent on old agues, are very common—a great many people labouring under this affection enjoy tolerable health, and only complain of it when attacked with fever, when it enlarges and becomes painful; many children under these circumstances recover astonishingly soon without any medicine whatever, when taken into service, and are well fed and clothed

Enlargements of the spleen often little complained of.

The tonic and purgative mode of treatment succeeds very well, but vinegar is the article of all others which natives covet in such cases as a perfect specific.

Cases of goitre, elephantiasis and leprosy are met with in all parts of the country, but not so frequently as might be expected, excepting at Suddra, where goitre certainly is remarkably prevalent.

Goitre, elephantiasis and leprosy not so often seen as might be expected.

In Assam the Medical art is at a very low ebb; there are a few Native physicians who are so perfectly satisfied with their own proficiency, that they never seek European assistance under any circumstances.

State of the medical art in Assam among the natives.

In answer to the question of how they treat their patients, the invariable reply is—"We give preparations of gold and silver with many jungle herbs besides"—luckily for the patients, no part of the gold or silver ever reaches their stomachs.

As all complaints are attributable more or less to witchcraft, the primary indication is to dispel that, and different forms of pooja and penance are the modes pursued with this view.

Although the Doctors keep their system of practice secret, if they have one—yet in a country where sickness is so prevalent for six months of the year, every old woman pretends to the knowledge of being able to cure the more common complaints, which are treated in the following manner.

Native treatment of common diseases.
Fevers.

In fevers, abstinence from all food, thirst allayed by milk and water, sweetened with goor and seasoned with ginger—cold applications to the head, (generally some mashed vegetable substance,) when symptoms of recovery begin to shew, a little rice and dhall are allowed, but fish and vegetables are forbid until convalescence is completed.

Dysentery and cholera.

In dysentery and cholera opium is their chief resource, and black pepper is given in considerable quantity made into pills with certain jungle leaves—cold applications are also applied to head and stomach in cholera.

Small-pox.

In small-pox, the patient is judiciously kept in the coolest place procurable—great care is taken that he sees no one dressed in any colored clothes, every thing must be white; what little jewellery there may be in the family is also spread out on a cloth before the invalid. All

the wild tribes in the neighbourhood immediately desert those affected to their fate and do not return until all cause for alarm has passed.

In worms, the natives are aware of the good effects of pomegranate bark which is used by them for their expulsion—they also say a decoction of the roots of the common chopper grass produces similar good effects.

Worms.

In surgery, nature works wonders—some of the recoveries after injuries by buffaloes and tigers are astonishing—under similar circumstances no European could have survived. Rest—a little laxative medicine, keeping the wounded parts clean, and in position, were all that was usually necessary—bruises and smaller injuries are immediately smeared with lime, which all carry about with them in their farm boxes—it serves the triple purpose of easing pain and heat, and of making a great display in the event of their having a complaint to make.

Wonderful recoveries often take place after apparently fatal injuries.

Should subsequent experience confirm the truth of the remarks now made on the nature of the climate, and the numerous occasions occurring in which it is absolutely necessary for troops to be exposed to its noxious influence, by which their constitutions suffer irreparable injury, be kept in mind, perhaps the claims of sepoy physically unfit for further service, who have served 15 years in Assam (most certainly equivalent to 20 anywhere else) might meet with the favourable consideration of Government if

Conclusion—recommending that 15 years Assam servitude should be allowed to count with natives as 20 elsewhere.

the hardship of their case was fairly brought to its notice.

As this boon might only be extended to those whose complaints were contracted in the country, and whose incapacity for further service is solely attributable to the effects of its climate, the indulgence would be thankfully received by them and be attended with a very trifling expense to the State.

BISHNATH, ASSAM, }
31st October, 1837. }

F I N I S.



Third Report on Tenasserim—the surrounding Nations,—Inhabitants, Natives and Foreigners—Character, Morals and Religion.
—By JOHN WILLIAM HELFER, M. D.

Position of the Tenasserim Provinces.—The Tenasserim Provinces, excepting the Malay countries of Province Wellesley, Malacca, and Singapore, are the only isolated British possessions in India.

They are surrounded by the bay of Bengal, (hitherto the only road of communication), and by foreign states. The river Salween divides them from the Burmese kingdom of Pegu towards the north-west; the river Thounyee from the Shan states of Zimmay, Laboung, and Yaihaing towards the north; the range of mountains running from north to south through the whole Malay peninsula from the kingdom of Siam to the east; the river Packchan from the Siamo-Malay states to the south; the bay of Bengal and the Nicobar and Andaman islands front their west side.

Surrounding nations.—The nations which encircle the provinces are, therefore, the two rival nations of Burmah and Siam, possessing a tolerably consolidated, established, and regulated government, the tributary and dependent Siamo-Malays, and the Burmah Shans, the half savage Nicobarians, and the Andamanese cannibals.

The Burmese possessions incorporated with British India.—The Tenasserim Provinces have been incorporated with the British empire in the east, in consequence of the war with Burmah in 1824-25. For the purpose of weakening that insolent and ignorant power, Assam, Arracan, and the Tenasserim Provinces were wrested from it.

Extent of Tenasserim.—The Tenasserim Provinces consist of a part of Martaban (now Province Amherst, formerly belonging to Pegu) and the districts of Ye, Tavoy, Mergui, and Tenasserim.

Motives for occupying Tenasserim.—There seems to have been no secondary motive for retaining these provinces, beyond their affording facilities to command the bay of Bengal; they could not have then held out any other apparent, known allurement.

Present relations with Burmah.—The misapplied generosity of the British, left their Burmah foes in possession of the most productive and important part of the empire. This generosity has been misconstrued into weakness, or inability to retain the conquest; which prevailing opinion has acquired greater strength since the usurpation of the present ruler, and this opinion, strengthened by the peaceable policy of the British Indian Government in this quarter, is the reason of the insolence of the present ruler of Burmah.

Formerly prevailing opinion of the Burmah power.—Formerly when all intercourse with Burmah was either cut off entirely to Europeans, or when the notices of the embassies of the British government sent to Ava could be but imperfect, on account of their always proceeding the same way by water, up the Irrawaddy to the capital, the power and population, the resources and abilities of this empire were greatly exaggerated.

Now corrected.—Since that time, our knowledge of it has greatly increased; the war laid the lower country open to investigation; and since the conclusion of the treaty of Yandaboo, several able British gentlemen have traversed the empire in different directions, and the conclusion drawn from personal experience has been, that Burmah could only rank in political importance with second rate Indian powers. It was found out, that the population formerly estimated at 17 millions of inhabitants, could not be reckoned at more than 3 or 4 millions scattered over a wide extent of country—that part of the population was tributary to the ruler—that, if that prince, be inclined to hostilities, he can but raise a kind of temporary militia, not exceeding at the utmost, 70 or 80,000 men—that a permanent disciplined soldiery does not exist—that the great part of this militia must be in a sad plight after a few months' campaign, placed opposite a disciplined army, commanded by Europeans, on account of want of ammunition, clothing, food, &c. &c.—that most of these men are peasants, driven from their homes by force to fight the enemy—that few of them know even to handle their arms—and that none of them are able to fight a British Indian army in the open field.

Erroneous opinions of the people.—In the same manner in which the abilities of the ruling power were misrepresented, an erroneous opinion was also formed of the character of the inhabitants.

Equally corrected.—Instead of finding the mass of the population *brute warriors*, they are in fact a harmless, naturally mild race of husbandmen, oppressed by a highly tyrannical absolutism.

Reasons of their military excursions.—The love of sudden gain, and that (to every nation) inordinate desire after adventures, carried them, under the lead of ambitious men in power, from time to time to invasions of surrounding states, and rendered them chiefly under the founder of the present dynasty, Alompra, in the last century, a conquering nation. Yet they were destitute of the roaming ferocity of the Tartars, or the bloody propensity of the Arabs, and of the personal courage of both. The mass engaged in such expeditions, after a few months devastation and plundering, returned to their homes to labour in the fields; and a small part of them continued robbers even in their own country, often not discouraged by their own government, perhaps, with a view of conserving in them the stock and spirit of soldiery, useful for future enterprizes.

An exaggerated military reputation.—The dread of surrounding, unsettled, petty nations, the never decided superiority between them and the Siamese, their succeeding even in defeating a Chinese army, nurtured in them a persuasion of their invincibility; the boasting of their blinded adulating courtiers, the ignorance of the true state of the country—a *terra incognita* to Europeans—all this contributed to create a high opinion of their power, and consequently an erroneous belief of danger to British India, until their own signal defeat in the last war, followed by the first dismemberment of their empire, destroyed this delusion.

Other neighbours.—Shans.—The neighbours to the north, the tributary Shan states of Zimmay, Laboung, and Yaihaing, are equally an agricultural race of people, the nature of their mountainous sub-alpine country induces them also to partly follow the pursuits of pastoral tribes. They appear to be weak clans, and profess to detest the Burmese, but are too insignificant to become independent; they have hitherto manifested a spirit of amity towards the British, and have shewn themselves anxious to be allowed to throw themselves under their protection.

Siamese.—The kingdom of Siam, fronting the Tenasserim provinces towards the east, is established upon the same foundations which are in these parts universally acknowledged and adopted. The government

is likewise an uncontrolled, sometimes very rigorous, absolutism; yet it appears Siam is advanced one step farther in civilization than Burmah, for its ruler not only protects agriculture, but encourages commerce; its inhabitants are undoubtedly more industrious, and in consequence, their country more wealthy. The fertility of the great valley and of the plains formed by the delta of the Meram river, is highly spoken of. The great number of Chinese settled amongst them has doubtless contributed to establish a more general and improved cultivation. The custom prevailing to this day of driving the population of whole districts, when conquered, to remote parts; forcing them to cultivate the ground, though in itself for the depopulated countries highly pernicious, seems to indicate that the government knows duly to appreciate the value of the labour of husbandmen. Though no positive data of the whole amount of the revenue are known, yet it must be, judging only from the duties levied at Bankouk, at least double that of the Burman empire.

The feelings of the court of Bankouk, manifested towards the British Government of India, have been hitherto those of amity and good-will. These feelings are dictated partly by apprehension for their own safety, partly by their hereditary enmity towards the Burmese; they viewing the British as the natural enemies of that nation. The Burmese and Siamese have been for a long time rivals, and in consequence, never friends. The weakening the Burmese gave additional strength to the Siamese. Before the British war with Burmah, neither of the two powers, though almost uninterruptedly engaged in petty warfare, could subdue the other; their military force and prowess being equal.

Their mode of warfare was confined in latter times to temporary invasions, accompanied by mutual devastations, generally to both parties equally injurious. The consequence was, that the confines of the two powers have been rendered a waste, and hence it is accounted for that the frontiers of the Tenasserim provinces towards Siam are totally uninhabited, desolate, uninterrupted forests, from thirty to eighty miles in breadth.

It appears from the late accounts of Dr. Richardson, that the high opinion which the court of Bankouk had conceived of the British power, and which they knew only to measure by the progress of British arms in the last war, has somewhat diminished, within the last two years. With the returning belief of their own strength, and diminishing apprehension of their new neighbours, the feelings of amity, and the desire of mutual peace, will be lessened.

The Siam-Malays.—The Siamese are conquerors in the Malay peninsula. The petty states to the south of the Tenasserim provinces (whose boundary is formed by the Pakchan river disemboguing in lat. $9^{\circ} 57'$) are under Siamese dominion. The races inhabiting it are mixed. Those in the neighbourhood of the Tenasserim provinces are either Siamese, or formerly captured Burmese, or people from the eastern frontier of Siam, besides others forcibly transplanted from other parts. The people lower down the peninsula are half Siamese and half Malays; and nearer to the extremity of the peninsula, of pure Malay origin. It seems that the Siamese government exercises in these provinces a much more severe absolutism than within the proper limits of Siam, and consequently it is proportionably more hated.

Malays.—The Tenasserim provinces have no intermediate intercourse with the Malays, except with some few people of this race, who have farmed the edible birds' nest caves in the Mergui archipelago, from government.

Nicobarians.—The people of the Nicobars, apparently the offspring of a mixture of surrounding nations, wrecked or dispersed accidentally on the islands, are totally insignificant in a political point of view.

There exist some relations between the Burmese of the Tenasserim provinces and these islanders, with whom a trade of exchange is carried on. The Nicobarians furnish ship loads of cocoanuts which they barter with the Burmese for cloth, tobacco, iron, and earthenware. They must be called independent at present, for though the Danes endeavoured repeatedly to take possession of some of the islands, at present not a vestige is to be found either of their establishment or of their authority.

Andamanese.—To finish the enumeration of the nations bordering on the Tenasserim provinces, mention must be made of the Andamanese, perhaps the lowest beings in the scale of civilization belonging to the human species. They are of the negro variety with woolly curly hair, of a diminutive stature, almost untameable, even when caught young, living upon trees, or under a shed of peeled bark, or in the crevices of mountains, subsisting upon the spontaneous produce of nature; their chief food consists of shell-fish, collected on the sea-shore. They are reported to be cannibals. No nation has yet succeeded in forming a friendly alliance with them, they considering every stranger an enemy, whom if it be practicable they kill, and in retaliation are destroyed by every stranger without compunction, whenever accident brings them in contact.

The interior of these large and interesting islands is entirely unexplored. The sea-shore is visited by the Burmese inhabitants of Tenasserim and the Malays, for the purpose of collecting sea-slugs, and edible birds' nests. These occasional visitors have no intercourse with the savage inhabitants, and live during the season of collection either in their boats, or build a sort of temporary stockade for their defence.

Notwithstanding the favourable situation of these islands in the bay of Bengal, notwithstanding the beautiful harbour of Port Cornwallis, the attempt to form an establishment there, made several times by the English for the sake of a military and commercial depôt, has been given up entirely.

The Dutch.—The Dutch is the only European power which has possessions in the post-Asiatic countries, besides the British (if the Philippine islands be excepted.) However not only their vicinity, but even their very existence is unknown to the people of Tenasserim; there is no intercourse, no communication whatever with their ports, and I believe that not a Dutch vessel has even approached the coast of the territory since its occupation by the British.

The French.—Some old inhabitants remember the French. In the last war, their fleets had for a time their station in King's Island Bay, for the purpose of intercepting the Indiamen trading to China; and their rendezvous place, as well as the rivulet from whence they supplied their ships with water, were pointed out to me by the Burmese. The French however never ventured upon an inland excursion, and the inhabitants then having scarcely any notion of the existence of Englishmen, could of course have no suspicion of the relations which existed between the two nations.

Intercourse with the Chinese.—Though a number of Chinese are settled in the provinces as merchants, yet there is no intercourse directly with China either by land or water. A caravan from the Chinese province of Yunan approached last year within fifteen to twenty days' march from Maulmain, and intended to penetrate as far as that settlement, for the purpose of trading; however, jealousy, and apprehension in general, as well as the then already manifest inimical intentions of the Burmese usurper, prevented those enterprising men from accomplishing their purpose. A considerable loss to them it is said was the consequence, and probably no other attempt will be made on their part, until the relations with the petty states to the north, through whose territories the Chinese have to pass, are based upon a more secure and solid foundation.

The different nations and tribes inhabiting the Tenasserim Pro-

vinces. Constant changes in Indo-China.—The stability of China Proper and Japan for so many centuries, forms a remarkable contrast to the constant and total changes which have happened in the adjoining countries comprised under the name of Indo-China, the constituent parts of which, are Cochin-China, Tonkin, Cambogia, Anjam or Loas, Siam, and Burmah. One race of people destroyed the other, and was again expelled and supplanted like the former, by subsequent conquerors. The kingdoms just mentioned as they exist at present, are erected upon the ruin of vanquished nations, whose history even, is frequently lost.

Alompra's Empire.—The territories of the Burmese empire had the same fate; and the present dynasty of Burmah is but of recent origin. Alompra, assisted by favourable circumstances, after many struggles, bloodshed, and devastation, finally overthrew Pegu, and established a new kingdom at Amarapoor, carrying from thence his victorious arms over a wide extent of country.

History of Tenasserim.—The history of the Tenasserim provinces is involved in darkness. Who the first inhabitants were can scarcely even be guessed at, for it is not known who the inhabitants were four centuries ago. To judge from the Kareans inhabiting the interior, who seem to have outlived all revolutions of the successive conquests, and following analogy, whatever inhabitants there were they seem to have belonged to Mongolic races. Burmah as well as Siam and Cambogia, seem to have been originally peopled from the north, and it is very improbable that the inhabitants of Tenasserim were ever mixed with Malay blood. The comparatively late arrival of that race from Menamcaboo in Sumatra, in the Malay peninsula, in the districts of Jabor, Malacca, and Queda, where they formed colonies, is now almost universally adopted as a fact approaching to certainty, and if so, they had no time to disperse themselves towards the north.

Two hundred years ago the inhabitants seem to have been of Talian extraction, somewhat related to Siam; and Martaban is mentioned by the Portuguese as a place of great commercial importance; the town of Tenasserim was an important fortress. The provinces remained under Siamese dominion until the latter part of the eighteenth century, when Alompra, the conqueror, took possession of them; and notwithstanding the repeated contests and incursions of the Siamese, they remained a part of the Burman empire until they were incorporated with the British empire in the east, in the year 1826.

Change of population.—With new conquerors arrived new settlers. After Alompra's conquest the Siamese seem altogether to have with-

drawn, and to have been supplanted by the inhabitants of Burmah.

Forcible introduction of people.—In many cases the introduction of new inhabitants was forcibly effected; of this we have still a proof among the Burmese inhabitants of the village of Tenasserim. After the conquest and destruction of this once important town, the governors of the province intended to rebuild it. The Burmese however, transplanted to that place, were more than any others exposed to the continuing invasions of the Siamese, who used to carry every Burmese into slavery. The inhabitants returned therefore repeatedly to the sea-coast, and Mergui became in consequence the chief town of the province. To force however the inhabitants to remain at Tenasserim, a number of people, formerly runaways, were marked with a painted ring round their eyes, and an inscription upon their chests, and many of the older inhabitants of Mergui and Tenasserim are yet to be found with these indelible signs.

People now inhabiting Tenasserim.—The people now inhabiting the Tenasserim provinces, altogether in number not exceeding one hundred thousand, are Burmese, Talians, Siamese, Kareans, Seelongs, and foreigners.

1. *Burmese.*—The Burmese, the former conquerors and lords, are to this day the most numerous. Their chief seat was Martaban; the settlement of Mergui was the second in importance; Ye the third. Maulmain is of recent origin, sprung up since the occupation of the country by the British.

Situation of their villages.—All villages, hamlets, and even solitary plantations of the Burmese, are near the sea-coast, or on the banks of navigable rivers, or creeks. They never established themselves far inland, even since the time of their first settlement in the country.

Apprehensions of Siamese incursions, natural predilection for water, and the facilities of transporting themselves and their goods through a country where roads do not exist, and if they exist, are with great difficulty kept in order, will be found the reason.

2. *Talians—from whence.*—The Talians are the inhabitants of the kingdom of Pegu, formerly the lords of Burmah, now subdued, and the slaves of the Burmese, by whom they have been since that time always treated with severity and barbarity. The greatest part of the original country of this people consists of plains of fertile rice-ground; and from the disposition of the Talians it would seem that nature had marked them out for husbandmen, and especially rice planters.

Where settled.—From the great tracts of alluvion which the mighty Irawaddy deposited, and which its numerous branches now intersect, as well as from the banks of the Pegu and Sittary rivers, the Talians extended to the Salween, compelled as it seems to spread and to retire, on account of the oppression exercised by the little controlled Burmese governors.

The province of Martaban, part of which is at present British, and comprised under the name of the Province of Amherst, was also inhabited by Talians, whence they seem to have spread from the banks of the Salween to the eastward, over the plains which are intersected by the waters of the Guin and Attaran. The mountain range to the east (now the frontier between Tenasserim and Siam) divided them from the river territories of the Menam, and appeared to form a barrier to their further extension from west to east.

Reasons of their migration towards the east.—But it seems the oppression of the Burmese in these districts, distant from the seat of government, must have been too severe to be borne; and forty thousand people expatriated themselves at once from the Province of Amherst into Siam, to exchange the yoke of Burmese rule for a milder despotism. When Amherst Province became British it was almost destitute of inhabitants.

Sensation and feelings of the Talians towards the British at the time of their first arrival.—At the commencement of the last Burmese war, the arrival of English soldiers in Pegu created an extraordinary sensation among the Peguans, the greater part of whom never before saw Europeans, who were represented to them as cannibals. When the first excitement subsided, and the people of Pegu had opportunities of perceiving that the foreign invaders were not only men like others, but much kinder enemies than they even thought compatible with the character of a soldier; they began to assist the British army, their hatred against their old oppressors broke out a fresh and they sincerely desired the total downfall of Burmese despotism.

The historian must regret to record, that conquered Pegu was again restored to the court of Ava, at the peace of Yandaboo. By this, these faithful allies were inconsiderately, and we may say mercilessly, delivered up again into the hands of their irreconcilable oppressors; an act, which they the least expected, as it was a notion incomprehensible to them, that a conqueror ever gives up voluntarily, what he once possessed indisputably. Many sought of course a refuge in the Tenasserim provinces, but many, chiefly those from distant parts, could not remove their families and goods in the first in-

stance, and were afterwards prevented from effecting their escape by the Burmese authorities. The cession of the kingdom of Pegu is the only reproach which this unfortunate race has to urge against the English.

Maulmain peopled by Talians.—The new settlement of Maulmain opposite to Martaban, now the capital of the Tenasserim provinces, was at first almost entirely peopled by Talians, and to this day it is computed that the number of Burmese to that of the Talians is in the proportion of one to twenty.

Obliteration of their distinguishing features.—The features of the Talians do not perceptibly distinguish them at present from the Burmese, the intermixture between the two races, which has taken place since many generations, has probably effaced or obliterated the distinguishing characteristics.

Existence of the Talian language.—That they are however a distinct people, is proved by their language, which they have preserved to this day, and which is said to have scarcely any resemblance to the Burmese. It is fast declining, and will probably cease to exist should the Talians continue to be subject to foreign powers, and there seems to be no probability of their again becoming an independent nation.

Burmese language generally adopted.—In British Tenasserim the Burmese language is adopted as the language of the courts, of public transactions, and of general conversation, which is but fair, as the majority of the inhabitants speak that language, and it is no grievance to the Talians, as two-thirds of them speak Burmese besides their mother tongue. The chief and almost sole occupation of the Talians is agriculture, and almost exclusively rice cultivation; they scarcely ever retire to the mountains, the amphibious life of a rice planter during six months of the year being to them the most congenial.

3. *Withdrawal of the Siamese from Tenasserim.*—Almost all the Siamese retired from these provinces after Alompra's conquest, except two villages to the south of Mergui, Boukpeen, and Lennya, where the Burmese had never resided; that part of the country, having always remained a disputed district.

From the time of the conquest, and probably before that time, Siamese and Burmese never met except as foes, and the system of alternate petty warfare, accompanied by kidnapping, plunder, and devastation, was carried on without intermission along the frontier districts, which in consequence, were soon transformed into a waste, and such they remain to this day. The Siamese seem to have been the

most dexterous in their plundering expeditions, and were, besides their greater daring, the most numerous ; for the Burmese in these provinces could only be considered as colonies, established partly by force, and kept up by dread.

Security established since the British occupation.—When security of person and property were established at the beginning of the British dominion, the Siamese government was given to understand that any such marauding excursions as were kept up under Burmese rule, would be considered as a breach of peace. The Siamese government released a number of people, about one thousand from Mergui Province, carried away during the last incursion, who were delivered up and returned to their homes.

The Siamese were of course permitted to come to the provinces on friendly terms. At first they were fearful, but when they perceived the difference between Burmese and English management, they gained confidence ; as the Burmese subjects once fled to Siam, to seek shelter under a milder yoke, so the Siamese now seek a refuge in Tenasserim.

New settlements of Siamese.—The Siamese population, consisting entirely of recent emigrants, increases, and there are settlements of these fugitives in several parts of the country ; their chief resort is the Province of Mergui, where they spread along the banks of the greater and lesser Tenasserim river.

Great difficulties it is said, are thrown in the way, on the part of the Siamese government, to prevent their migration. If caught, it is affirmed that decapitation is the inevitable consequence.

To reach the first British Tenasserim settlement, they have (besides the danger of being apprehended) great difficulties in passing through the pathless wilds ; whole families not unfrequently lose their way, erring for a month or more in the forests, reduced to the greatest extremities, living upon jungle-fruits, leaves, and barks, before they arrive near the sea-coast. It may be imagined that without these impediments, the influx of Siamese would be much greater than it is at present.

Their character.—The Siamese are an industrious, hardy race, and more enterprising than the Burmese, besides being easily manageable, quiet, obedient, and orderly. They would be, in greater numbers, a desirable accession in the wilds of Tenasserim.

They are the only people who have introduced the cultivation of the sugar-cane, for the purpose of making sugar ; of course as yet to such a limited extent, that it has not in any degree become important.

Many of them are huntsmen by profession, living for months in the wildest forests, where they shoot elephants for the ivory; they are also the trappers, tamers, and managers of elephants in general, to them in their own country the most important of domesticated animals; while in the Tenasserim provinces, under Burmese rule, elephant scarcely ever known tamed. The greatest part of the Siamese in the provinces approach more to the Malay than Chinese type in their features, which are generally very coarse, and their women very ugly, though both are generally well built, and taller than the Burmese. The huntsmen, particularly, are very nimble, sprightly, dexterous, and courageous; while the peaceful cottagers of the two settlements of Boukpeen and Lenny, which existed before the British occupation, are on the contrary dull. We cannot be allowed to judge of the Siamese as they appear in Tenasserim, for they were before they arrived the poorest class of depressed slaves, whom necessity only drove to seek a peaceable asylum. The more wealthy and favoured Siamese in the great delta or valley of Menam, and those towards the gulf of Cambogia, are said to be intellectually much advanced, and the great number of Chinese living among them, will have communicated to them more civilized manners, and improved modes of cultivation.

4. *The Kareans—their origin.*—The Kareans are the inhabitants of the longest standing in the provinces, who have survived the shocks of succeeding revolutions. Their origin cannot be traced. Some suppose them to be the aborigines of the country, some affirm they are the wreck of a great nation, fallen into dependence and slavery, expatriated and spreading afterwards over a wide extent of Indo-China, for they are found from the 11th to the 23rd degree of north latitude. The American missionaries, who are much interested about this people, are of opinion that they originally came from Thibet; the opinion seems however to rest only upon the congruity of names and some manners.

Their station.—Wherever they exist, they hold an inferior station in the country, excepting the so-called red Kareans to the north of Maulmain, who have resisted the Burmese influence,—they are mountaineers, subsisting upon prey and plunder.

The Kareans of the Tenasserim provinces, forming separate colonies, inhabit such parts as are unoccupied by any other inhabitants, which are the inland portions of the country; they there choose their abodes either on the banks of rivers or in secluded valleys. These communities do not generally consist of more than from three to twelve houses or families. As they have the custom of intermarriage, they are nearly related to each other. Soli-

tary huts of Kareans are often to be found in places where for many miles in circumference no other human being is to be found. They live exclusively upon the produce of the soil, planting mountain-rice, and some other indispensable articles, generally as much as they want for home consumption. Very rarely has a Karean a surplus, more frequently not sufficient to subsist upon.

Migration seems almost incompatible with the occupation of a husbandman, and is certainly a strange anomaly in a country highly productive; yet the Kareans subsist solely upon the produce of their plantations, and have no permanently fixed habitations.

Modes of cultivation.—When a Karean family has chosen a place for a plantation, huts of bamboo thatched with palm-leaves are constructed, and then a part of the forest is cleared, just as much as is necessary to plant the ground with rice, requisite to maintain the number of persons settled for a year. The paddy is sown upon the imperfectly burnt down forest, without any tillage or other preparation, and whatever else is wanted (cotton, indigo, sesam, vegetables, &c.) is promiscuously sown or planted on the same spot. The following year, another spot is cleared in the vicinity, and after some years, or when a death happens, the family removes to a greater distance, and begins again the highly laborious task of felling immense forest trees, visiting only from time to time the old establishment, which yet yields fruits surviving several seasons; and so the Karean wanders all his life time, without having settled permanently.

The reason for this extraordinary custom is differently accounted for. The Kareans say, that one and the same place does not produce rice for several years; an objection which is refuted by the example of other countries similarly situated, where new lands are not so abundant as here.

Others say, that there is greater trouble in keeping the ground clear from weeds, than to fell a new forest, which seems equally incredible. Probably the roaming propensity of the Kareans, and old established custom, are the chief reasons; to which must be added a great superstition and fear of *nâts* and evil spirits; such beings, having in their opinion, an allotted dominion over certain districts.

Whatever may be the origin of this extraordinary custom, certain it is, that the produce must be inferior; all perennial cultivation being in this way excluded, and gradual amelioration quite out of the question; hence it may be that the Kareans have remained always stationary, upon a low scale of civilization.

Their fate under the Burmese government.—Under the Burmese government the Kareans were depressed, and were liable to be called upon to do public works without remuneration, whenever it pleased the government.

This relation towards their masters exposing them to all kinds of vexations without hopes of redress, seems to have been the first reason of their retiring into seldom visited, or sometimes inaccessible parts of the country, where they hoped to be beyond the immediate reach of their oppressors.

Though they have been placed on the same footing with the Burmese since the conquest of the country by the British, and enjoy at present formerly unknown rights and an impartial justice, yet they are still so timid that they can scarcely be prevailed upon to visit the towns on the sea-coast.

They have a language of their own, which has lately been drawn from its obscurity by the exertions of the missionaries, though they are without any communication with their brethren in Siam and Burmah, even confined sometimes as long as they live to the narrow sphere of their self-chosen district; yet it is affirmed that the Burmese Kareans bordering upon China, at a distant of 13° of latitude, speak a dialect of the same language which is current amongst the Kareans of Mergui Province.

5. *The Seelongs—their origin.*—These are again a variety of people different from all others just enumerated. They are the last in the scale of civilization, but not the least interesting.

The Seelongs are the inhabitants of the islands constituting the archipelago of Mergui, and are a race of wandering fishermen, building temporary huts of reeds, palm-leaves, and bamboos during the inclemency of the monsoon, and passing the rest of the year either in boats, or on the sea-beach under the shade of trees; they live upon the spontaneous productions of nature, but chiefly upon the produce of the sea; turtles, fish, and shell-fish forming the principal food.

They never cultivate the ground. Their origin is unknown. Whether they are the wreck of some more numerous and independent nation, as they pretend to be, gradually vanishing from the face of the earth; or whether they are the descendants of shipwrecked people, a mixture of different races, augmenting in the course of time, will scarcely ever be determined.

Their number.—As they exist at present, they form but a petty tribe, not exceeding, it is said, one thousand souls in number, and they will probably soon be extinct, for they are diminishing annually.

They have a peculiar language, but too little is known of it to determine whether it is a mixture of the languages spoken around them, or a peculiar tongue.

Their civilization.—It may well be imagined, that they are on a very low scale of civilization, one should think far below the North American Indians; yet the term savages, so lavishly bestowed upon so many nations not meriting that epithet, is not applicable to them.

Their communities.—They form communities, divided into families, governed by strictly determined usages, which are always punctually adhered to; they accommodate themselves willingly to the laws of the government on which they are dependent; they carry on a petty trade of exchange; they have a correct notion of right and wrong; crimes are little known, and the transgressors rigidly punished; they live in peace and harmony amongst each other; their food is the spontaneous productions of nature; they are totally ignorant of what exists beyond their rocks and islands; they have no established form of religion, pretending, as they express themselves, never to have thought whether there be a future existence or not.

Their former relations with Burmah.—At the time of the Burmese rule they were the most independent and unharassed people of the provinces. The Burmese have always been very bad seamen, scarcely able to retain possession of the islands belonging to their territory, and never could cope with the skilful Malay pirates. The Seelongs however, though freed from Burmese oppression, were nevertheless not better off, for they were a prey to all the numerous buccaniers not long ago infesting these seas.

Their seclusion.—It is very difficult even to this day to meet this roaving tribe amongst the islands which they visit; they hide themselves whenever they see a strange sail approaching, and it cannot be denied, that they have reason to be apprehensive, for to this day irregularities can easily occur in the Mergui archipelago, where not a shadow of British authority is permanently established, on account of these parts having hitherto been entirely useless and unknown; and it is only to be wondered, that depredations on a larger scale have never occurred in those parts in late years.

The whole population considered.—These are the different races inhabiting the provinces. The small number of all (taking them collectively, not exceeding one hundred thousand) spread over an area of thirty thousand square miles, proves clearly that these unfortunate countries have been the constant scene of contest; that as the one or

the other nation settled, and began to thrive, it excited the envy and desire of a powerful neighbour, who in a single successful invasion devastated all, exterminated, dispersed, and carried away the population; and that the descendants of these, in their turn, were treated in the same manner by subsequent conquerors. The Taliens, the Siamese, and Burmese, experienced successively these calamities, and the remaining mixed populations are the wreck and ruins of their forefathers, surviving their former sway and subsequent downfall. The Kareans and Seelongs, who as far as it is known, were always in subjection, had still less opportunity to increase and flourish.

Having no country of their own to retire to, they in the first instance under the scourging authority of the conqueror, felt all the calamities of invasion, and never enjoyed a time of undisturbed peace and prosperity, which was at least accorded to the conquered, in the intervals from one invasion to another.

6. *Foreigners—Chinese.*—The most important and most useful of all foreigners are the Chinese, whose semi-compulsory emigration disseminated them over the whole of the Indian archipelago, and other adjoining parts.

The tide of this emigration poured in, in the first instance, into Cochin-China and Cambogia, on account of their vicinity to China Proper, and half of the present inhabitants of these countries are represented to be of Chinese origin. They have acquired great importance in Siam, where 200,000 of this people are said to be alone in Bankouk and its neighbourhood. The Chinese also form a part of the population of the Philippine Islands. The Dutch though treating them from time to time very harshly, patronize them on the whole, in their possessions and dependencies, and their numbers are continually augmenting in Java, and in the Moluccas. Chinese are settled in Borneo, Celebes, Timor, and Sumatra. The British possessions in the straits of Malacca are full of Chinese; and Chinese are found to the north of Ava in Burmah.

Their settlement in Tenasserim.—The Tenasserim provinces held out but a slight prospect to the Chinese under Burmese rule, on account of the insignificance of the country. The Burmese authorities seem to have encouraged their settling, and the small number who did settle, acquired wealth and consequence, by succeeding in monopolizing the few lucrative branches of occupation in the country. They do not palpably increase, but will certainly augment rapidly when the provinces become of greater importance.

Their occupation.—The first forms in which Chinese appear in a foreign country are, either as merchants if they have any capital, or as artificers, if they have none. In Tenasserim the Chinese are merchants and ship owners, or ship-builders, spirit brewers, carpenters, blacksmiths, bakers, and gardeners. The introduction of Chinese in great numbers ought to be encouraged; they would be a great blessing in the wastes of Tenasserim if they would turn husbandmen.

To the generality of this people, Tenasserim as a promising place of resort is unknown, and it is the interest of the Chinese already settled to obstruct a more general introduction of their countrymen, in order to avoid competition. All Chinamen settled here confine themselves to the chief places on the sea-coast. All are married to Burmese women, and their children, if males, are brought up as Chinese, adopting the customs, manners, and dress of their fathers; they are however easily distinguished by their features, which are generally, in the eyes of Europeans at least, more comely than those of either of their parents.

People from India. 1. *Chinlias.*—The natives of the Coromandel coast, here generally known under the name of Chinlias, somewhat resemble the Chinese in their voluntary expatriation, which has its origin in the too great population of their own country, as they say; but probably much more from the facility of acquiring abroad in a shorter time, a sum of money with which they think to return like the Chinese into their own country again. By far the greater part of both however, have either not had time to accumulate enough, or think they have not enough, and they die before they accomplish their design. Their progeny, a mixed race by native women, is settled for ever in the country. A considerable number of these Chinlias are to be found in Penang and the other Anglo-Malayan possessions. They partly preceded, but many more followed, the extension of the British power in Tenasserim.

Their numbers.—Their number is not great, and they are confined to the places where Europeans reside, with whose customs and wants they are much more acquainted than the natives, and by administering to which they gain their livelihood.

2. *Bengalees.*—The same may be said of the Bengalees, who however are always inferior to the people of the peninsula of India in enterprise and capacity.

3. *Convicts.*—The convicted felons transported from Hindoostan, form also a part of this class of foreigners. Their number exceeds at present one thousand seven hundred.

Their fate in Tenasserim.—These unfortunate men are always treated with the utmost mildness, and the present state of many of them, who are well-behaved, is undoubtedly better than it ever could have been in their own country. The system is introduced, that after a few years' transportation, if they behave properly their irons are taken off, then they can be hired out either as workmen or private servants; as they have then opportunities of mixing with the inhabitants, they have also an opportunity of forming connexions with native women. Many of them, when the term of their banishment is expired, settle in the country, (hitherto but few of them have served out their time); they then form part of the population, as well as their progeny.

System of transportation.—This system has been much blamed, and certainly the introduction of so many felons into a country cannot contribute to improve the manners of the original inhabitants, but it does not deteriorate them in that ratio, as is imagined.

Difference between Indian and European felons.—An Indian convict is a different being from an European felon, and almost universally the former will be found superior to the latter.

Thugs.—The hideous crimes of the Thugs (the by far greater majority of convicts in Tenasserim are Thugs, or professional murderers) originate in religious motives, and when religious motives are set aside, yet the majority of the Thugs have been brought up from their infancy to murder as to a trade; after their conviction, they prove by their conduct that they are by far not so much depraved as they are supposed to be. The transportation of criminals from Hindoostan to this as well as to other territories, instead of confining them for life in loathsome prisons, is a commendable political act, and it is natural, that such parts should be chosen which are the most distant and in want of population. Though it seems never to have been the intention of Government to form in Tenasserim a penal settlement in imitation of New South Wales, yet part of the Hindoos will undoubtedly become colonists in course of time.

Armenians and Parsees.—Wherever there is a commercial place in the East, holding out a prospect of gain, there we are sure to find Armenians, Moguls, and Parsees, the chief native merchants, resembling in a great measure the Jews of Europe, chiefly such as they were in the time of the middle ages.

They are equally a dispersed people with the Jews, without a country of their own, equally industrious, persevering, and shrewd, and equally oppressed when they trust to native princes, but notwithstand-

ing wealthy. Until now Maulmain is the only place where they have settled, because it is the only place in Tenasserim carrying on trade.

The Portuguese.—The descendants of the Portuguese, so generally spread along the sea-coasts on both sides of the peninsula of Hindoostan, are also found in Tenasserim. No nation left so many survivors of its transient glories in the East as the Portuguese; but the progeny of Vasco de Gama's followers is sadly degenerated; they have retained nothing of their renowned forefathers, but the type of their religion, which is however with them only a heap of superstition and show of outward ceremonies, besides their language is barbarously corrupted by numerous Indian idioms. The European features are recognizable in many, but their condition and state of civilization are nearly the same with those of the natives amongst whom they live, and frequently much lower. They have all formed connexions with native women, and have no tie which unites them with Portugal, of which they are altogether ignorant. Their being nominally Christians, and their steadiness in adhering strictly to their faith, preserve them as a distinct class.

American missionaries.—There are a number of American Baptist missionaries in the provinces. They have made little progress in the conversion of the natives. The Burmese do not well know how to draw a difference between Englishmen and Americans, and they consider the latter to be a peculiar variety of itinerating white people, whose real aim and purpose are to this day unknown, or indistinctly guessed at by the multitude, and to the knowing few, a puzzling enigma. They pass under the name of foreign teachers.

Englishmen almost all in official capacities.—There are besides the civil officers of government, and the body of military officers belonging to the regiments, and besides the Europeans constituting the regiments, (two at present), few English residents here, and these are almost all congregated in Maulmain, where they are chiefly engaged in ship building, or otherwise connected with the teak forests in Amherst Province. Until very lately not one English gentleman thought of settling for the purpose of calling forth into practical use the numerous resources of the country. All Englishmen have hitherto been on friendly terms with the natives, in every part of the country. The Burmese population have too much regard for their new governors, not to treat with politeness, affability, and good-will every individual with European complexion, and no European can ever have had reason to complain. The awe which European superiority, and

British political ascendancy inspires and spreads throughout the Eastern nations, influences probably as much the natives to treat an European with particular consideration, as the appreciation of security and of a mild rule conferred by the British, over such a great portion of mankind.

Character of the natives superior to the Indians.—The character of the natives in Tenasserim is, on the whole, praiseworthy. By all who have had an opportunity of drawing a parallel between them and the natives of India Proper, they are declared superior to the Indians. One of the peculiar features of Burmese character, and one which is to a superficial observer striking, is their independence and manliness, forming a striking contrast to the submissiveness, humility, and effeminacy, so universally met with in India.

Independence and manliness is an apparent anomaly, if found amongst a people, who have been swayed by one of the most despotic governments in Asia, since time immemorial; but to account satisfactorily for this apparent discrepancy, it is necessary to keep in view the nature of Indo-Chinese despotism. It is laid down in these countries, and considered by all people as an indisputable axiom, that all and every thing is the property of the king, and that the king is lord of life and land. This rule of state and nations adopted in Indo-China, operates differently for the rights of men, though they have been always under such an axiom unknown, or not understood, yet the infringement of them, could not have been every where effected equally.

I confine my observations to Tenasserim, endeavouring to shew, that independence can exist, even where a man is doomed to be the property of his sovereign from the moment of his birth.

People in Indo-Chinese governments, are theoretically slaves of the king, but not virtually. The government could not use the whole population for government purposes. If part of the population were called upon to sacrifice their personal liberty, either to carry on a war, or to accomplish some public work; it could be only a temporary measure, and after the purpose of government was effected the majority would return again to their homes, released from their temporary bondage. The infringement consists in the unjust, forcible, and arbitrary exaction of the property of the subject.

Tenasserim formed an out-station of the Burmese empire. Governors were sent to manage public affairs, who were often superseded by others, before they knew the resources of the provinces. The inhabitants therefore easily found the means to deceive their superiors about their abilities to contribute to the revenue, or refused to do so.

The village head men, or Thoogies, were generally elected out of their own tribe, and by bribing them the villagers often succeeded in deceiving their superiors.

The Tenasserim provinces were a conquered, ruined country, thinly peopled by Burmese colonists, which never yielded a considerable revenue to government. Taking the inability of the population for granted, the exactions from Ava were more moderate; and when the exaction of the governors, and the oppression of government became insupportable, part of the population found an asylum in the wilds of the country. It is said to have been a common occurrence for people to abscond with their property into the jungles, and there wait for more auspicious times. So common must have been the practice, that after a fourteen years' peace, and annually strengthening confidence in the present government, the Kareans to this day cannot be persuaded to come to town, because they have apprehensions for their personal safety.

When the rumour spread over the provinces, in 1838, that Tharawaddie's armies were approaching to reconquer the country, the people of Tairy and Ye laid up stores of rice in the jungles, ready to fly at the approach of the foe.

Their being greatly freed from the influence of priestcraft, as will be shown afterwards, and their having no castes as well, are two additional weighty reasons for speaking in favour of their independence. Their manliness is ascribable to the same source. The greater portion have often been reduced to extremities in the jungles, where skill and courage were called into play to extricate them from difficulties, and they have enough opportunities to this day to exercise this spirit of manliness, in their often protracted wanderings in the pathless wilds of their own country. Out of this state of the country, such as it was under Burmese rule, sprang another characteristic of the people, not less prominent, but not at all praiseworthy; this is cunning, shrewdness, and falsehood. Where people of every rank, from the commonest coolie to the prime minister, had to deal with despots, at whose mercy they were without appeal, and where they had to practise every kind of delusion, to evade the manifold tyrannies which threatened them, cunning and shrewdness were therefore considered virtues of the first magnitude. The common daily bazar proceedings, however, furnish a proof that they are honest enough in mercantile transactions, far more so than their Indian neighbours, and much more than the crafty, treacherous Chinese.

All engagements ought to be ratified in public courts, then they

will be observed ; for the natives have such a dread of judicial proceedings, that they will scarcely ever infringe upon publicly made contracts. When after the British occupation, all was placed on a certain undeviating footing, cunning and shrewdness became to them of less avail, and are said to be daily less common. One bad quality however remains with them from the time of Burmese rule, which they cannot get rid of, this is falsehood in speech. A Burmese if asked a question, even of the most unimportant nature, scarcely ever gives a direct answer, but will ponder a long time, and then couch his words, in an ambiguous sense ; and if he cannot succeed in this, he will plead his ignorance straight forward, though he may be well acquainted with the subject asked. This want of good faith is a bad quality in a subject, and it would naturally follow, that an attachment to the government cannot be relied upon, and the British government ought to be on a continual guard not to be overthrown by treachery. It can be supposed, however, that there is no fear of that ; the dispositions of the Burmese on any other subject may be as doubtful as possible ; but the boon which has been conferred upon them by an equitable administration is so generally appreciated, that they fear only the present state of things will not last for ever. Only few individuals, once in power, might gain by a change ; but they will never find adherents amongst the mass of the population ; from a rebellion therefore, the government has nothing at present to apprehend.

Religious connection of the Burmese in Tenasserim with the king of Ava.—Profound veneration and attachment to the present royal family in Ava is generally spread, and has its source in religious feelings—Gaudama the first of beings, and the royal family the next in rank in this world.

Though the Burmese in the Tenasserim provinces know that they are at present quite independent of the ruler of Ava, and are not influenced by any of his ministers or governors, yet they consider the emperor of Burmah as the head of religion, • but acknowledge cordially, the worldly supremacy of the English. The more enlightened and wealthy of the inhabitants take a lively interest in the affairs of their ancestors' country ; the overthrow of the king and his ministers, the usurpation of Tharawaddie, the subsequent expulsion of the crown prince, were watched with anxiety, and the present cruel proceedings keep them in awe and suspense.

The Burmese hold the customs of their forefathers in high veneration, but not so the laws imposed upon them by their superiors. The reason is, that the laws until lately have always been

arbitrary, too often not conducing to their happiness, and frequently contrary to their interest. The Burmese accustomed to tyranny, never questioned the right of imposing whatever laws their superiors thought proper, but they opposed them when they had the power, and evaded them when they had the opportunity. * * *

The love of country in the Burmese, is based much more upon natural, than moral ties. It is the face of the country, the manner of living, the similarity of occupations which ties the Burmese. As far as his language is spoken, and the face of the country is the same or similar, this is his country. From the banks of the Tenasserim to the mountains above Ava, forming the Chinese frontier, a Burmese is at home, and would be so in Cochin China could he make himself understood. The moral ties, the recollections of his youth, his parents, his wife, his children, do not so much rivet him to the spot, as the ties above mentioned. Hence a Burmese is easily induced to exchange his sojourn in Mergui for a better livelihood in Maulmair or Rangoon, but a Burmese will never be found to expatriate into Hindoostan Proper, and very few are to be met with in Penang.

Common Interest.—The common interest which an assemblage of communities exercises, has little weight in the eyes of a Burmese. He prefers the British countries, because they are safer; but supposing an equal guarantee were held out to him in Pegu or Ava, he would scarcely settle there as in the Tenasserim provinces.

Fame, fortune, and power, cannot be appreciated by the natives of these countries otherwise than as they contribute to their bodily welfare. To consider them as the means of accession to moral ends, would appear ridiculous to the Burmese. The above passions had amongst the Burmese, a much wider field for development under their own government, than under the British. The wish to become illustrious seems at present to be nearly stagnant, they perceive that the Europeans are mentally their superiors; that the power wrested from them, is entrusted entirely to the former; and they know that they have to develop their talents only in the functions of native magistrates.

Desire after fortune is innate in every human breast, but it is less inordinate in the Burmese, simply on account of not knowing how to employ it; for fame and power, cannot be longer bought with fortune. It formerly rendered a Burmese famous, to employ his fortune in building pagodas and endowing khiaungo, or monasteries. The people emulated the prince and the ministers, who expended immense sums in this way. The British government has nothing to do with the

embellishment of Buddhistic symbols, or with the support of the numerous Buddhistic monks, and the people begin to be tired with the exertion of a sort of fame, which is not appreciated by their superiors.

Avarice.—Avarice, or an inordinate desire after fortune, without considering it as the means of gaining any thing else, seems as far as I have observed, no native vice. The Burmese hoard up money frequently in secret places under pagodas, not unfrequently in the bamboo rafts of their houses; but this does not originate in avarice, but in the apprehension of insecurity, and ignorance how to employ the capital advantageously. All Asiatic nations, living under despotic governments, who have constantly the violation of property to fear, act in like manner, and bury their valuables. British stability is not yet understood, and the certainty, that the British will maintain the country against expected attacks from Burmah and Siam, not yet believed in; so that the natives cannot be blamed for following the impulse of their distrust.

Rights of property.—The rights of another's property, are well understood and generally held sacred; except in the larger places on the sea-coast, where, like in all larger congregations, irregularities are much more common; however very few thefts happen in the country; property entrusted to natives by Europeans is very rarely embezzled; and with money they are considered more trusty and honest, than the same classes in Europe.

Robberies.—Robberies committed on the highway, or on the water, are unknown as far as I am aware, since the British occupation. Those committed on the Salween last year cannot be imputed to the Tenasserim people; they were perpetrated at the instigation of the hostile neighbours on the Burmese side.

Murder.—The same may be said of murder. To commit deliberate murder is not within the sphere of Burmese character, and murder committed in passion is equally rare, for the Burmese are much more calm than excitable, and form in this respect a great contrast to the Malays, their neighbours.

Passions—revenge.—That the Burmese are not passionate, is obvious even to a superficial observer; how far they are revengeful I do not know; however, I never had an opportunity of witnessing inveterate rancour, or hatred. There are no hereditary quarrels; in which respect the Buddhists, amongst other good qualities, have again the preference over the Mussulmen; the neighbouring Malays being

equally famous for implacability, with their religious brethren in Arabia.

Politeness.—The opinions which have been disseminated in Europe about Burmese in general, where they were represented as blood-thirsty barbarians, are wrong. On a mere superficial acquaintance, their mildness and placidity are apparent. Their behaviour is conformable to strict rules of decency. Politeness is the characteristic of all the natives of Indo-China, which amongst the lower classes in Europe is too little exercised, and which is again exaggerated when speaking of the Chinese. The Chinese are more formal than polite, on the contrary, they are sometimes rude. The Burmese are naturally polite, not only to strangers, but amongst themselves. Boat people gathered together by order of government, and strangers to each other, live crowded in a small place for months in an uninterrupted state of harmony. Common coolies address each other as Sir, and the rare occurrence of fights and quarrels amongst the lowest classes, shows, that they know how to pay each other, on all occasions, that deference which is due to a fellow creature.

Courtesy and good fellowship.—Courtesy and good fellowship are strictly adhered to; the people of one village form a community, bound together by friendship and mutual wants; and a stranger not entering into their adopted mode of life is not tolerated.

Exercise of charity.—Charity is little exercised in a country where real wants do not exist. The disabled and decrepid are maintained by their families, relations, or even by strangers. The exercise of charity amongst the Burmese cannot be considered a virtue, as its practice does not call for a sacrifice, the alimentary subsistence of a person amounting monthly to a mere trifle.

Hospitality.—Hospitality is considered in all (not European) countries, not a virtue, but a duty, for in a country where the comforts of life are not so far advanced, as to lead to the establishment of inns, all intercourse with people in distant districts would be interrupted without hospitality. Hospitality in general, is dictated either by philanthropy or by religion. In the latter case, it embrace men of a particular sect, party, or nation, and such hospitality is chiefly exercised in Mussulman countries; philanthropic hospitality has its origin in the common rights of society,—such is exercised by the Buddhistic nations. In all parts are zayats, or resting places, built expressly for travellers, who take possession of the building by right, and if the travellers be poor, they are provided by the inhabitants with food, sometimes on application, and sometimes without.

It is a peculiar institution in Buddhistic countries, to erect sheds at short distances in which are placed chatties (earthen vessels) filled with water to afford drink to the wearied traveller.

Temperance.—Temperance is one of the shining qualities of the Burmese; their fare is simple, moderate, and wholesome. They subsist chiefly upon vegetable substances,—rice is their chief food, all other ingredients secondary.

Like all natives of the tropics, the Burmese are fond of spices; these condiments seem necessary to digestion in equatorial climates. The majority of the people, who are Buddhists, do not drink spirits, a drunken man being considered a degraded being. The Kareans make an exception, they indulge in temporary intemperance on solemn occasions. Opium smoking exercises its baneful influence wherever the drug is introduced; it is fortunately however too expensive a vice, to which rich people only can be addicted. In the public opinion, it is held degrading, and the epithet of “Opium smoker,” denotes a bad character, capable of performing the worst acts.

All nations whose climate permits them to remain unencumbered with clothes, whose abodes permit the free circulation of air, whose occupations are mostly in the fields and woods, and require a free exercise of the limbs of the body, will be found possessed of agility, dexterity, and hardiness, which are the concomitants of good health, if no local causes operate inimically. The Burmese in Tenasserim are remarkably healthy, strong, and muscular, without being powerful.

Perseverance.—The Burmese are capable in moments of excitement of great exertion, but their energy is of short duration. Want of perseverance is a characteristic of them; the reason of which may be, that few of them are engaged in regular, never ceasing, monotonous labours. The Burmese mode of life does not force them to toilsome, long continued exertions. In a highly cultivated country they gain their subsistence with little trouble, and because they scarcely ever know absolute want, or even poverty, they are more indifferent to affluence.

Patience.—Patience is the result of that mode of life which people are generally obliged to lead, who occupy countries where nature has scattered her bounties with parsimony. Though few of the Burmese are exempted from the cares of life, and the vicissitudes which attend a regular occupation, yet disappointments are not often experienced; and as only the repeated experience of disappointments creates patience and endurance, the Burmese cannot possess that virtue.

Love of children.—One of the chief virtues of the Burmese is the love of their children, so long as they are young and helpless. This characteristic they have in common with all nations who live in a state of nature, the social connection between child and parent being the first and strongest. Burmese parents are in a state of distraction when any accident happens to their progeny; and the death of the child is often considered an irreparable calamity. Great numbers of children cannot be a burden in a country which is highly productive, thinly peopled, and enjoying security of life and property. A childless age is considered one of the greatest punishments imaginable. It will easily be perceived, that under such circumstances infanticides are entirely unknown. It does not seem here to be the case, that the love of the child holds equal pace with that of the parents.

Love of parents.—The facility of gaining independence, and the state of almost unbounded liberty in which the children roam about from their first infancy, loosen very much the ties of filial duty; there are however, but few instances of direct ingratitude on record; numerous cases however are known, where a son has taken voluntarily a debt of his father upon himself, and become a debtor servant for 7 to 10 years, to deliver his father from ignominy and prison.

Marriage.—Marriage is entirely a civil act amongst the Burmese, and considered as binding only so long as both parties find it convenient. Separation is of daily occurrence, and no public blame is attached to it. Such union cannot be supposed to possess moralities. Natural fidelity is therefore not absolutely required, and adultery is the more frequent, as there is no public ignominy attached. So an adultress; a woman lives in illicit intercourse with the consent of her husband, and when separated can form again a new union without prejudice to her, and without her new husband troubling himself about her past conduct. The seduction of unmarried girls is rather a rare case, almost impossible; because a girl attaining the age of puberty is as soon as possible disposed of by her parents. The infidelity of the wife here forms a striking contrast to the rigorous jealousy with which females are guarded in all Mussulman and Hindoo countries; it is not only met with in Burmah, but equally in Siam, Cambogia, and Cochin-China. The natives of these countries all professing Buddhism, it seems to have its source in religion, much more as the Kareans, who have no positive mode of worship, are in this respect much more strict than their Buddhist brethren.

Polygamy.—Polygamy is allowed in Buddhistic countries, and the number of wives is (as wherever polygamy is introduced) in propor-

tion to the means of maintaining them. The generality however are content with one wife at a time, and the bad effects of polygamy are confined to the comparatively small number of the wealthy. Marriage is contracted easily. The difficulties in over peopled countries, where a certain settlement or occupation in life, or a certainty of income is necessary, before people marry, are not experienced, here where every body if he like, can maintain a wife and family with ease. Polygamy and faithlessness, divide and loosen the affections of parents toward their children, yet it has been stated that the Burmese doat on their children ; and it is a strange anomaly, which is however daily seen at Maulmain, that a Burmese has a particular predilection for a fair child by his wife, even when he is well aware that it is a spurious offspring. This is, however, only the case amongst the lower classes. We have not yet any proof, how children by English fathers and Burmese mothers will turn out when grown up, the intercourse between the two nations having subsisted but fourteen years ; if we however may judge from what the children promise at present, we should be inclined to anticipate that they will be superior to the progeny of Europeans by Indian women.

Religious establishment for the education of the children.—Polygamy and connubial faithlessness have also in general bad effects upon the education of children, diminishing the care and attachment which ought to be felt. The religious institutions of the country have provided for this case. The children are at an early age placed in monasteries, established at almost every village, and endowed by the voluntary contributions of the inhabitants. There the children remain for a certain period of their boyhood, where they are fed by the monks, and instructed in reading, writing, and religious rites.

This is the education which almost all Burmese attain, but they seldom know more ; hence the general diffusion of elementary knowledge, and general ignorance in the higher attainments of science, and the great uniformity of knowledge throughout Burmah.

Knowledge of the priests.—The Pomgys, or priests, are considered the learned men of the nation ; but their knowledge consisting in the explanation of theological and metaphysical doctrines, is therefore mystical, but the more appreciated by the vulgar majority, because incomprehensible.

Religion.—The peculiarities and characteristics of a nation are mostly intimately connected with their religion. Religion either dignifies or degrades the human character. In considering the religion of the inhabitants of these countries, we must form a distinction between

the Seelongs, Kareans, and Burmese, for all three have different creeds, and therefore different ideas of the Deity.

Religious belief of the Seelongs.—The Seelongs must be considered in this respect, as a people in the lowest scale. Yet the idea of the Deity forces itself upon the most savage mind.

These people have no religious creed, they have no established mode of worship, i. e. no outward manifestations of their acknowledgment of a superior being; yet they have a vague idea or impression, that there exists besides mankind, some other not visible beings, exercising an influence over the destinies of mankind, &c.

To them even the notion of polytheism and idolatry is too vague, and as far as I could, after a prolonged inquiry, understand, they believe that the sea, the land, the air, the trees, and the stones are all inhabited by nâts or spirits, either good or evil; who direct the motions of these bodies; who produce the growth of plants, &c., &c. How far these spirits influence men, they do not pretend to know. Of a future state they are entirely ignorant upon for in touching, this question, they invariably answered, "We do not think about that." The observation of things around them, seems therefore to strike their poor minds; and their small share of reflective power, leads them instantly to the acknowledgment of an invisible superior being.

The dawn of reasoning and the idea of a Deity, however imperfect, seem therefore identical; and the belief in nâts or spirits, seems to be the first and lowest of all religious creeds. The opinion that the lowest religion begins with idolatry, is not corroborated by what we find amongst these people; the Seelong's idea of a Deity is so imperfect, that he does not even represent it by a figure. The idea of the Deity being in its infancy indefinite and vague, idolatry itself is an advance to positive religion.

Religious belief of the Kareans.—The Kareans, who are already more advanced than the Seelongs, have also the idea, that certain trees, or caverns, or animals, are the abodes of mighty spirits, to whom they however do not as yet assign a form. The Burmese on the contrary, who have already their system of the Deity, embody these notions, form images, and pay them superhuman devotion, as the representations of these conceived and systemized ideas. The Seelongs apparently not believing distinctly that superior and invisible powers directly influence mankind, propitiary sacrifices, and an external mode of worship are not introduced. The Kareans having an idea of the direct influence of nâts upon the destinies of mankind, offer sacrifices to them, consisting of fowls, tobacco, rice, and pieces of mo-



ney, depositing them in certain reputed places in the jungles, and sometimes under small sheds, near their houses. The Burmese have a strictly observed ceremonial, external worship, celebrated in temples, pagodas, &c., &c.

If it is true that morals cannot exist without a positive religion, and that morals cannot be maintained without the notion of a future state of rewards and punishments, the people of this portion of the world cannot be in our sense moral, for the Seelongs and Kareans have no established religion, and the religious creed of the Burmese even excludes a continued active state after death.

Buddhism.—The leading features of Buddhism are predestination, metempsychosis, and final annihilation or absorption.

The principal moral precepts of Buddhism are the following,—

1. Eschewing every kind of evil.

2. Fulfilling of good.

3. Purifying or cleansing of the heart ; which latter again is obtained by *Neggen sheet ba*, or the eight good ways, which are, i. Caution. ii. Security. iii. Rightly directed intelligence. iv. Right actions. v. Right words. vi. Right opinions. vii. Right intentions. viii. Right way of supporting life. According with the destiny of their good or evil actions all men pass after death into certain forms, become nâts, or a lower degree of spiritual beings, or they continue to be men, or they turn into brutes. The highest degree of perfection to which any being can or will come, after passing through numerous grades of nât existence, is *Neibban*, or annihilation, or following the translation of others, an existence in a perfect state of quiescence. This is the essence of Buddhism, a religion generally diffused over a great portion of Asia ; probably, counting no less disciples than Mahometanism or Christianity. Most of the people are satisfied with performing the rites of their religion, without attempting to understand its theology, and even among the priests few are able to expound their religious tenets, because there are few who can read and write Palí, in which language their religious system is written.

They content themselves with the recitation of certain prayers, invocations, &c. and, the priests as well as the mass of the people, find it much easier to perform external ceremonies. The Buddhist adherents do not try to make converts, at least not in this country, and they are equally tolerant to all sects ; they do not affirm that their creed is the best or alone true, but say it is that religion fitted best to their country, state, and individuality, and they adhere strictly to this faith.

Conversions to Christianity in Tenasserim.—Few Burmese turn

Christians from the conviction of the superiority and blessings of our religion; and isolated are the cases of those, who for the sake of worldly gain became nominally Christians. The missionaries have hitherto signally failed in their endeavours, and the reason of the want of success with the Burmese is not fanaticism or obstinacy, but religious dogmatical indifference. They admit the beauty of Christian morals, but contend that theirs is equally good; and with reference to the dogma they say, that the Christian is equally unintelligible with the Buddhistic, and that in comparing both, they do not see any great difference; it would be bad to abandon their notions and customs, their families, and all that is holy and dear to them, to follow the advice of strangers. Kareans, on the contrary, who have positively no established mode of worship, embrace Christianity; and some of the American Baptist Missionaries, who settled amongst them, did much good. Infinitely more could be done, if all the Missionaries were equally well fitted to open the hearts of these simple children of nature by mild persuasions, instead of filling their minds with distrust by holding up the terrors of damnation.

Recapitulation of the aforesaid.—After having touched upon the essence of religion, the state of morals, the characteristics and peculiarities of the people, we are led to the following conclusions—

1. That the inhabitants of the Tenasserim Provinces possess the virtues of uncultivated nations.

2. That they cannot be expected to possess the higher morals and virtues of nations advanced in civilization; that fortunately the vices of polished nations, are, if not unknown, yet rather rare amongst them.

3. That their vices are in a great measure the consequence of the long misrule of highly oppressive and arbitrary governments.

4. That they possess original views of morality, different from those of Europeans on certain subjects, which are chiefly applicable to the comparatively low estimation of chastity among their women.

5. That the whole nation is educated to a certain degree, but that education stops short at that point, and that no higher cultivation can be expected from the present state of things.

6. That religion is no impediment to their advancement, as it does not imbue them with prejudices against other creeds, and that the absence of the caste system, so obnoxious in India, is a great advantage if their improvement be contemplated.

7. That the Burmese are therefore capable of great improvement.

Diffusion of European knowledge.—Very little, or nothing has hitherto been done by the British government, to educate the people.

There are three schools established ; however, they are more for the benefit of country-born and Portuguese than for Burmese. The Burmese are not averse to learning European arts and sciences, on the contrary they have a predilection for every thing European, the whole nation being convinced, that Europeans are superior to them in every respect.

If means and inducements were diffused to learn the English language, it would form the first important step to the mental improvement of the Burmese ; for with the introduction of this language, English sentiments are easily instilled. The establishment of well regulated schools upon these principles would be a great boon, especially if the distinguished pupils, were rewarded with minor places under government.

It would have, besides, the great advantage of rendering the people more attached to their foreign rulers, and acquainted with English ways and customs, of which they are at present entirely ignorant.

The present form of government is too new, too strange to them ; the relations between the British and the natives, too few, and too distant to expect, that sympathies should at present exist, or attachments be formed.

Though the British government all over India is well established, and is preferred, because decidedly better than any other formerly existing, yet the governing and managing Englishmen, personally, though in many instances highly esteemed, are not always liked, and very rarely beloved, because they are in most cases to the natives a strange enigma.

Value of the Tenasserim provinces as a part of India.—In the first years of their occupation, the question was raised, whether it would not be more advantageous to restore them to Burmah ; and when this was abandoned, because deemed impolitic, they were kept as a necessary burden, the expense annually* exceeding the revenue derived from them.

Their possession, however, is valuable in a political point of view, besides, containing the elements of great wealth and riches, which want only development, to become pre-eminently conspicuous.

1. They command a great part of the eastern side of the bay of Bengal, which bay became, since the occupation of Tenasserim, a British sea, excluding any other power, and affording additional security to the rest of the Indian possessions.

2. They prove an advantageous position towards Burmah itself,

which is peculiarly visible at the present juncture of affairs with that power. Maulmain being the main point from which an invasion and conquest can easily be accomplished, without being obliged to plunge at once, as in the last war, into the hostile territory.

3. Their natural wealth consists, in a number of valuable productions, unknown at the first time of their occupation, and which are more or less wanted in India, such as tin, iron, coal, teak, and other valuable timber, and a host of other minor productions.

4. They afford the best possible field for European enterprize, being adapted for every kind of tropical cultivation, affording therefore the greatest inducement to make them the resort of Europeans.

" NEXT to the additions which have been made since the end of the last century to our knowledge of Physiology, we may place the numerous important observations by which our information as to the external causes of disease has been rendered more extensive and more precise.

" These observations and the inferences from them, demand the more attention from Physicians, that they necessarily involve a kind of evidence essentially different from that on which we proceed in other Medical inquiries, and if we durst hope that the progress of human wisdom and virtue would bear any proportion to that of human knowledge, we might expect, that the lessons to be drawn from these inquiries would prove of even greater importance to the future happiness of mankind, than any which we can gather from the history or treatment of disease.

" These inquiries have in some instances been prosecuted by individuals in civil life ; but the opportunities of making decisive observations on some of the causes of disease which occur in the experience of Medical Officers of fleets and armies, who are perfectly informed of the whole circumstances of the organized bodies of men under their observations, and often see these circumstances suddenly altered, or have even the power of altering them at pleasure, are much superior to those which other practitioners enjoy ; and the peculiar value of such observations has never been so well understood as during the last war."*

* ALLISON'S History of Medicine in the present century.

Scale of British Miles

100 50 0 100 200 300

85° 90°
30°
Outlines of the
VALLEY OF THE GANGES,
shewing the Geographical Position of
AWADH
and its Political boundaries.
in 1775 and since 1801



OUTLINES

OF THE

TOPOGRAPHY AND STATISTICS

OF THE

SOUTHERN DISTRICTS OF OUD'H,

AND OF THE

CANTONMENT OF SULTANPUR-ODH

BY

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OF EDINBURGH.

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1839.



*On the River, near Benares,
September 15th, 1838.*

To

The Secretary to the Medical Board,

FORT WILLIAM.

SIR,

IN conformity with the requisition of Government, conveyed through the Medical Board, I have the honor to forward a sketch of the topography and statistics of the cantonment where I was last stationed, and of that part of the surrounding country, which would not naturally fall under the notice of the medical officers, who may be expected to have prepared statistical accounts of Luk'hnow, Seetapoor, or any of the British districts adjacent to Oud'h. I have, to the utmost extent of my knowledge, endeavoured to give a faithful, and unbiassed description of the Southern Districts of Oud'h: but the total absence of that official information, which is open to the topographers of the Company's provinces, has rendered the attempt more arduous, and its execution more imperfect than at the commencement of my task, I had expected. Its completion has been delayed, by a severe, and lingering illness, contracted in the performance of my duty.

I have the honor to be,

Sir,

Your most obedient Servant,

D. BUTTER, M. D.,
Surgeon 63d N. I.

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- II. Map of the Southern Districts of Oud'h.
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OUTLINES
OF THE
TOPOGRAPHY AND STATISTICS
OF THE
SOUTHERN DISTRICTS OF OUD'H,
AND OF THE
Cantonment of Sultanpur Oud'h.

CHAPTER I.—GEOGRAPHICAL POSITION.

THE great valley, drained by the Ganges, and its branches, extending from the heads of the river Banās, in E. L. $73^{\circ} 16'$ to the junction of the former river with the Brahmaputr, is 1,100 miles in length; and, having about 415 miles of average breadth, includes a surface of about 457,000 square miles.

Of this extent, 190,000 square miles, including the reserved dominions of the King of Oud'h, which have been estimated at 23,923 square miles, may be considered as a plain, having, in a length of 1,050 miles, a rise of only 1,050 feet, from the sea-level.

This plain is bounded, on the north, by a long and narrow mountainous tract, extending from Simla to the frontier of Bhotan, and covering an area of 74,000

square miles; and on the south, by the Vindhya mountains, with their un-named continuations, extending to Delhi, and to Rājmahāl, and including about 193,000 square miles of surface.

Oud'h is situated, a little westward of the centre of that portion of the Gangetic plain, which, from Karnāl, on the W. N. W. extends 700 miles, (in a line slightly curved to the south) to Puraniyā, on the E. S. E. This central portion of the plain is traversed, in the direction of its length, by six parallel rivers,—the Jamnā, Ganges, Saī, Gumtī, Deohā, and Raptī.

This *orienting* of the great physical features of the surrounding region has a powerful influence on the climate of Oud'h. It changes the north-east and south-west monsoons, which, under other geognostic arrangements, might have maintained thus far their original directions, into irregularly alternating currents of air, which follow the general configuration of the plain, and the water-lines;—the westerly winds coming, generally dry, and cold, or intensely hot, according to the season of the year,—and when dry and very strong, always loaded with fine sand,—from the arid plains of the north-west;* while the easterly winds bring with them the tepid dampness, and the malaria of Bengal, and Assām.

These observations are necessary, for the elucidation of the climate of Oud'h; but I shall leave to the topo-

* The desolation, which a prevailing current of west wind loaded with fine sand has wrought in Idumea, and in the Oases of Libya, will in time find a counterpart, in Upper India. Two great rivers, the G'hāgar and Saraswatī, have already disappeared; their extinction having probably been accelerated, by the diffusion of their water for irrigation, in canals, like those now drawn from the Jamnā.



grapher of Lak'hnau, and of the northern portion of the kingdom, the subjects of its History, and of its General and Progressive Geography, and shall, in the following pages, restrict my remarks to that part of the country, which lies south of the capital.

CHAPTER II.—FACE OF THE COUNTRY.

SECTION I.—INCLINATION.

The general surface of the country, except in the vicinity of its rivers, is a plain declining to the E. S. E. at the rate of about seven inches in the mile. The only irregularities in its surface are occasioned by the unequal resistance opposed to the denuding effect of water, by its various and irregularly distributed soils. Some patches of ground, where kankar largely predominates, undergo abrasion very slowly, and stand seventy or eighty feet above the neighbouring country, the superior strata of which originally consisted of less coherent materials, and have, in the course of ages, been swept away, by the agency of wind, and water.

To the abundance of Kankar,* and the consequent permanence of the banks of its streams, is to be attributed the nearly perfect drainage of the country. Its internal rivers, however winding their courses, are thus prevented from deserting their channels: and any

* This singular concretion, containing the elements of the chalk and oölite, has been supposed to explain the absence of those two formations, from the geological structure of the Indian peninsula.

exit, once established from an otherwise insulated hollow, gradually deepens itself, until the hollow is perfectly drained. Several marshes or rather extensive pools still remain undrained; but they are now generally exhausted in the dry season, either by the process of irrigation, or by spontaneous evaporation.

SECTION 2.—NATURAL VEGETATION.

The general aspect of the country is prodigiously influenced by the seasons. During the months of April, May, and the greater part of June, almost all annual plants are withered up, and swept away by the hot winds, which then prevail; and except in some reserved tracts of jangal, one uniform ashy hue pervades the face of nature, diversified only by occasional patches of irrigated crops, and by the deep green of the scattered clumps of mangoe, tamarind, pīpal, banyan, and other trees, which generally bound the horizon. But with the first falls of rain, towards the end of June, the glaring brightness of the burnt-up soil is converted into a general verdure, which, by force of contrast, has, at first, almost a sombre effect to the eye. As the rains continue, vegetation advances rapidly, and covers almost every neglected spot of ground, with a tangled mass of herb and reed-like grasses, which flower and decay with the commencement, and in the course of the cold season, extending from November to February, both inclusive.

The reserved tracks of jangal, above alluded to, constitute an interesting feature of the country, both in a physical, and political point of view. • Some of them occupy the low lands, (kāchār,) adjacent to, and annu-

ally overflowed by the Ganges and Deohā, which oppose formidable obstacles to the clearing and reclaiming of the waste lands. But others are situated on high ground, being traditionally believed to be remnants of the primæval forest of Oud'h; and are carefully preserved from the axe, by the neighbouring Zamindārs, to whom they have long afforded a secure asylum, from the tyranny and rapacity of the Chakledārs.

Of the former description are the jangals of Harhā and Bangailī, in Bainswārā, which extend inland, from two to five miles, from the Ganges, and are strictly confined to the low land,—there being no jangal in their vicinity, except the tall grass and j'hau jangal, which cover the high kankar bank of the river, and which give shelter to numerous deer, wild hogs and tigers. In the dense jangal of the kāchār lands, to which the refugee Zamindārs resort, nīl-gā'es are met with, but no tigers, it is said. The Zamindārs with their followers remain there one, two or three months, according to the length of the Chakledār's visit to their villages, but are always driven out of this stronghold, by the annual rising of the waters of the Ganges. It is remarkable, that they never suffer from any local causes of disease, during their residence in this low-lying jangal: the pious brahmans, among them, attribute this exemption from sickness to the salubrious qualities of the sacred stream.

The higher-lying jangals are numerous, and are sometimes interspersed with cultivated ground, as in the case of the immense forest, which surrounds Baliyā, a town containing 6000 hindū inhabitants, 12 miles north of Partābgur'h. The Zamindārs of this favored

spot have long been accustomed to pay their shares of the public burdens, with good will and regularity. They have therefore permitted the cultivators of the soil to take advantage of its surpassing fertility, and to cut down much of the surrounding forest, which extends nearly ten miles, from north to south, and six miles, from east to west: but the remaining portion, consisting of very large and ancient trees, is reserved on account of the pasture, which it affords to their cattle; the ground underneath the trees being thickly covered with grass, from the end of June, till the middle of January, and the cattle subsisting upon the fallen leaves of the trees, during the rest of the year. The soil is a red sandy loam, without kankar, and, when ploughed to the usual depth, produces wheat four feet high. It is irrigated from wells forty feet deep. There being, during the dry season, no water on the surface of the ground, this forest is free from wild elephants. The tigers, also, which formerly were numerous, are now extirpated, although there is much low tangled brushwood, in several parts. It would appear, from the healthiness of its inhabitants, that the forest is free from malaria, although it is here and there covered, a foot deep, with withered leaves, during the greater part of the dry season, and although the northern part of the forest is traversed by a nālā, which dries up soon after the end of the rains, and is bordered with cultivation. The trees are of great size, chiefly the chilwal, rī'ān, sinhor, bar, and d'hérā or ag'hor.

Near Niwurdīpūr, the river Saī running through it, is another large jangal. It belongs to the town of Agai, which contains 8000 Hindū inhabitants. The jangal is eight miles, from east to west, and two miles

from north to south, and is, for the sake of the pasture which it affords, allowed to remain almost entirely in a state of nature; no cultivation having been attempted, and no clearing of the forest permitted, except the removal of the fallen branches for firewood. Agāi is close to the south side of the forest, and is a healthy place. No one enters the forest during the rainy season, as it is then encumbered with thorny underwood, and infested with snakes; but it is freely traversed, at all other seasons, without fear of or injury from malaria. Tigers sometimes find their way into the jangal; but the villagers are good marksmen, and easily destroy them; getting within shot, either by enclosing them within a ring of people, or by watching them, from trees at places, when they come to drink.

Until the year 1833, there was a great ch'hiul jangal, about six miles to the south of Niwurdipūr. It was twenty miles in length, from north to south, and eight miles broad, approaching Mānikpūr within eight miles. The soil, which it covered, having been found of good quality, and there being little difficulty in cutting down the ch'hiul jangal, which is free from thorns, nearly the whole of it has been destroyed since that period, and the remainder is rapidly disappearing. The proportion of forest trees, interspersed among the ch'hiul, is small, and they are therefore cut down in March, with the lower jangal, and the whole is set on fire in May, forming a conflagration, which is by night visible, at the distance of ten miles. If the forest jangal occurred in larger quantity, it would as usual be reserved for the sake of the sustenance afforded to cattle by the grass, which would grow under its shade, and by its leaves. This jangal land is lightly assessed, being rent-free

for the first year of occupancy, charged at only two anas per big'hā the second year, four anas the third year, six anas the fourth year, and the fifth year ten anas; beyond which, as an encouragement to settlers, the rent is never raised. This was the only extensive jangal remaining in that part of Oud'h. Irrigation is easy, water being found at the depth of ten feet; and many wells and tanks have been constructed.

The banks of the Gumtī, from Lak'hnau to its exit from the Oud'h territories, are at every five or six miles studded with patches of jangal, some of them six miles in diameter; and the political boundary is strongly indicated, by the general cultivation, and numerous villages of the British territory. These jangals are generally composed of d'hāk, akahr, sehor, karaundā, (a very prickly variety), large bargad trees, and thickly interwoven bair, and mukeiā bushes. The Chakledārs sometimes follow the refugee Zamīndārs into these jangals, but are generally unsuccessful in their pursuit, and sometimes endeavour to realize the revenue, by cutting down the trees and other jangal, and sending them by water to Lak'hnau, even from a distance of 60 miles. In the jangal of Ganeshpūr, which commences three miles north of Pālī, and extends to Rudaulī, the Zamīndārs frequently remain three years, by the end of which period, they have generally effected an arrangement with the Chakledār: but if he decline their terms, they will sometimes prolong their own out-lawry for a dozen of years, subsisting partly on the produce of their flocks, partly by the cultivation of detached pieces of ground in the depths of the jangal, and partly by the plunder of the surrounding villages. Six miles south of Pālī, is the Rāmpūr jangal,

also a place of refuge for oppressed or refractory Zamīndārs: and three miles south of Amīnāganj is another, which is a favorite place of shelter, from its affording abundance of good water. These jangals are secluded tracks, far from roads (or rather lines of communication), among nālās and broken ground. Towards Faizābād, the jangals consist of the ch'hiāl, karaund, mako'e, and hains trees.

With the introduction, which now cannot be far distant, of a more equitable, but more strictly enforced revenue system, these remnants of the sylvan vesture, which adorned the country,—which warded off by its shade, and immense transpiration, the fierce rays of the sun, and which thereby,—as well as through the direct deposition of dew dropping from its leaves,—maintained an almost perpetual verdure on the ground, and gave origin to frequent springs of running water,—may be expected gradually to disappear; thus completing the slow, but certain process, by which India, like all other semi-tropical countries, (such as central Spain, southern Italy, and the Western territory of the United States), has its green plains,—no longer capable of entangling and detaining water in the meshes of an herbaceous covering,—ploughed into barren ravines, by its sudden and violent, though now short-lived rain,—its mean temperature, and its daily and annual range of temperature augmented,—its springs, and perennial streamlets dried up,—the distance of water from the earth's surface increased,—and its rain-falls, and the volume of its rivers diminished. Artificial planting, also, which might, if carried on systematically, arrest the current deterioration of climate, is on the decline:—this subject will afterwards be more particularly adverted to under its appropriate head.

SECTION 3.—RIVERS AND MARSHES.

The principal rivers of the southern portion of Oud'h are the Ganges, Deohā, Gumtī, Saī, Tons, and Lon; the first two great rivers constituting its south-west, and north-east boundaries, and the others running parallel with, and between them. In former times, there were many more permanent streams, which are now dry, except when the rains are running off.

The Ganges and Deohā are usually open, at all seasons, for the largest class of boats, that navigate those streams. They run in alluvial beds of considerable width, and are constantly changing their channels,—their annual rise being about thirty feet, their courses comparatively straight, and their currents proportionally rapid, during the freshes. The windings of the smaller branches of the Ganges have been accounted for by Major Rennel, by the deflection from a straight line, which the river undergoes, in consequence of some portions of its bank yielding to the force of the stream, more readily than others, and thus constituting the external side of a curve, which, in conjunction with the submerged sand-bank, formed lower down the river, from the debris of the fallen bank, throws the stream against the opposite bank lower down, and there produces repetitions of the same process, which is continued to the river's embouchure, and each loop of the winding gradually enlarges, until it approaches the adjacent link, when the intervening isthmus gives way, and affords a direct passage to the river, the deserted loop thenceforth constituting a j'hīl or stagnant marsh. But this explanation is inapplicable to the singular windings of the smaller rivers of Oud'h, which have, in

all probability, undergone little change during many centuries, and the devious direction of which must have been originally determined by the extreme flatness of the country, and by the fortuitous position of the line of least resistance, in the circumference of each of the shallow pools, with which this great plain would have been studded, on its first emergence from the ocean. The Ganges has a low bed, four miles in average width, within the limits of which it changes its course annually; in the lapse of four or five years shifting from the one to the other limit: while the smaller rivers have gradually worn for themselves narrow and permanent channels, generally between kankar banks, which they now hardly ever overflow; the surface of their waters being, from twenty to eighty feet, below the level of their banks during the dry season, and seldom rising more than fifteen feet, during the rains,—frequently only half as much. That the Gūmti, in former times, rose to double this height is obvious, not only from the historical fact of Sir Robert Barker's brigade having in 1773 sailed *over* the stone bridge at Jaunpūr, but also from the wave-worn horizontal marks, everywhere visible, on its high kankar banks: and within the last thirty years, it is recollected by the inhabitants of its vicinity to have risen upwards of twenty feet. It is still excellently adapted for navigation, its waters never dispersing themselves over a greater breadth than 140 yards, and generally having a depth of four feet, in the driest season; while its excessive windings, which lengthen its course 75 per cent., answer the purpose of canal locks, in diminishing its slope and rapidity. It is, however, intersected at every four or six miles, by kankar ridges of two or three yards in width, which, in the dry season, sometimes diminish the depth to two

feet. These ridges might be removed at no great expense, were the political condition of the country such, as to give its natural importance to the trade between central Oud'h and the British provinces. At present, the few boats which convey supplies to Lak'h-nau return empty. During the rainy season, boats of 1,000 and 1,200 *māns* are sometimes seen proceeding to Lak'h-nau.

The right bank of the Gūmtī, from Pālī to beyond Sultānpūr, consisting of solid kankar, bears a miniature resemblance to the mountain ranges, on the right bank of the Jamnā and Ganges; both constituting barriers, which limit the *southward* tendency of the courses of these rivers. The corresponding left bank is low and sandy, to the extent of one, two or three miles from the river, and is condemned to sterility, by the difficulty of digging efficient wells: beyond this waste border, the soil is more tenacious and therefore more easily irrigated. The right bank of the Deohā also is high, while the left, to the distance of many miles from the river, is low, and full of springs, permanent pools and streams.

During the rainy season, the water of the Gūmtī is loaded with an immense quantity of yellow clay, and becomes unfit for drinking: and when any great mortality prevails at Lak'h-nau, or along the banks of the river, a putrid scum forms on its surface, occasioned by the number of dead bodies thrown into it. Fish, which constitutes part of the diet of perhaps one-fifth of the population, abound in the Gūmtī, especially during two or three months of the rainy season.

The river Sai is, in the rains, navigable for small accommodation boats of 300 *māns*, as far as Rā'e Barēlī, above which point there is no trade carried on ; but ferry-boats only are to be seen on it ; the Ganges and Gūmtī afford better routes, the Sai being extremely serpentine in its course, and the exactions of the Zamīndārs intolerable. At the city just mentioned, the river is as broad as the Gūmtī, but has only half its depth. It abounds in fish, which are caught by the mallāhs, and eaten by all classes of the population, including Rājputs, and all brahmans, except pundits.

The Tons (Tēons, Marhā or Bisohī), is an off-set of the Déohā, which it leaves about five miles above Faizābād, and after uniting with the Little Tarjū, runs into the Ganges, ten miles below Buxar. Its banks, like those of the Sai, are not so high and *kankary*, as the right bank of the Gūmtī. About fifteen miles below Faizābād, a cross branch, named the Khajuhā Tāl, and which was formerly the principal head of the Tons, unites this river with the Déohā. This cross branch, as well as the Tons to the extent of nearly forty miles from its present source, is during the dry season embanked across at different points, in order to save its water for the purpose of irrigation. The lowest embankment is about four miles from Akbarpūr ; and immediately below the embankment are observed the springs, probably in part derived from the embanked portion of the river, which at that season maintain a current in the south-eastern part of its course. The insalubrity of the air, caused by this extensive system of embankment, will be adverted to in another part of this memoir. The Tons, like the Déohā and Gūmtī, is

observed to contain less water than formerly : it is not navigated above Azīngar'h.

The Lon naddī rises near Shāhābād, on the north-west frontier of Oud'h, and, running midway between the Ganges and the Saī, falls into the latter river, about three miles above Rāé Baréli, occasionally forming, for two or three days in the rains, a considerable torrent, but never becoming navigable. During the dry season, there are only detached pools of water in its course ; but its banks supply cattle with a short green grass all the year round, although they are high, dry and salubrious. The manufacture of salt, from the saline springs along its course, will fall under notice hereafter.

Lakes or Marshes. There are no permanent lakes of any considerable extent ; but, during the rainy season, extensive shallow collections of water form in the hollow parts of the plain, and are either absorbed by the soil, or gradually drain off into the adjacent water-courses. Among the most remarkable of these inundations are the following :

The Basahā Tāl is half a mile broad, and four or sometimes six feet deep, in the rainy season. It commences north of Banārmāu, and runs into the Lon naddī.

In the Salon pargana, there are several large j'h'ls, which dry up after the rains, without occasioning any insalubrity of the air, excepting the large j'h'il, two miles in diameter, which lies on the south side of Sanéhi, and which, during the drying process, causes a great deal of fever, though little mortality in that town.

Eight miles west-north-west of Mānikprū is a j'hīl sixteen miles long, formed in the deserted bed of the Ganges, and connected at its eastern extremity with that river during the rains: it is eight miles in width; and its western extremity is now ten miles distant from the Ganges. The town of Bètāgānw, which lies at its north-west extremity, is the unhealthiest spot in Oud'h, the permanent inhabitants suffering much from ague during the rains, and immigrants from other parts of the country generally dying within a year, from the effects of its pestilential air. It is remarkable, that the repeated attacks of fever produce neither dropsy nor disease of the spleen in the human subject, but that buffaloes are subject to enlargement of that organ, and, if pastured along the j'hīl, rarely live more than three months; the chief mortality among them occurring in the month of March. The general appearance of the inhabitants is not, as in the Sub-himalayan tarā'ī, affected by this distemperature of the air. The vicinity of the j'hīl is always infested with musquitoes to an extraordinary extent. It always contains water; and much rice is planted along its borders, towards the end of March.

Natural springs, which in former times were abundant throughout Oud'h, and which are still very numerous in Sarwār, the country beyond the Jéohā, are now very rarely seen on the south-west side of that river. There never had been any hot springs; nor had any of them become objects of superstitious regard.

CHAPTER III.—METEOROLOGY.

SECTION I.—CLIMATE.

The climate of the southern portion of Oud'h is chiefly characterized by dryness: the depression of the wet-bulb thermometer* is frequently 30° in the hot winds, and generally from 10° to 20° during the cold weather. It may be considered as an "excessive" climate, being excluded from the equalizing influence of the sea-breeze: the temperature of the air occasionally rises as high as 112° , and sinks to 28° . The mean daily range is about 30° , and the mean temperature 74° . The annual fall of rain has, within the last thirty years, become extremely irregular, varying from 70 to 30 inches in amount, and from four to two months in duration; but is, on an average of five or six years, steadily decreasing. In places, where grass formerly grew tall enough to be used for thatch, it now scarcely affords pasturage for animals. This gradual falling off in the quantity of rain, and consequently of agricultural produce, is observable to every man who has lived forty years in Oud'h. From the same cause, it is now found necessary to make wells much deeper, than in former times.

The winds almost always follow the general direction of the mountain-chains, and rivers, which bound and permeate this portion of the Gangetic plain; west winds

* Leslie's hygrometer, as I have shewn in Captain Herbert's "Gleanings in Science" for 1830, page 24, is rendered unfit for the accurate determination of the air's dryness, by the extraordinary error, which he committed, in making an arithmetical instead of a geometrical division of the scale; and which, gradually augmenting from each extremity of the graduation, attains its maximum, at the point corresponding with 128° of Fahrenheit, which it makes 140° !

blowing about 200 days, and east winds during the remainder of the year. In the hot season, the wind frequently blows from the east in the forenoon, and changes to the west about mid-day. The air during the whole of the dry season generally holds in suspension a quantity of fine dust, which impairs its transparency towards the horizon, and gives a general greyish aspect to the sky. Hence the extreme distance of the landscape never exhibits at that period the deep blue, which bounds the extensive plains of England, and of Italy. Towards the end of the rainy season, however, the air is occasionally highly transparent, affording sometimes, for seven or eight days in the year, a distinct view of some parts of the Himalaya mountains, which are nearly 200 miles distant. The vault of heaven is at such times of a bright blue, diversified with brilliant white clouds, which at sunrise and sunset are tinged with bright prismatic colours; and the phenomenon of converging rays, in the quarter of the sky opposite to the rising or setting sun, is not unfrequently seen in great perfection: these rays are sometimes observed to cross the whole extent of the sky, in alternate bands of dark and light blue, thus unveiling the mystery of their origin. During three years residence at Sultānpūr, I never observed an instance of the *mirage*, which is annually visible, during the cold season on the plains of Ghāzīpūr, and Sāran. The zodiacal light is conspicuous throughout the year, when clouds are absent.

Hoar-frost has become of much more frequent occurrence, within the last thirty years. Before that period, it used to happen, once in every ten or fifteen years: now it occurs almost every year.

SECTION 2.—COURSE OF THE SEASONS.

Few countries possess climates superior to that, which Oud'h enjoys, during the cold weather months of November, December, January and February. With the exception of a few days of rain, which, though sometimes deferred till January or even February, usually happen about Christmas, the air is, during this season, dry, and of an agreeable temperature, and the sky almost uniformly free from visible vapour. Throughout this portion of the year, the nights are cool; and during neither night nor day is ventilation rendered necessary, by the *temperature* of the air, in a good house. Just before sunrise, a light breeze generally springs up from the west, and, sweeping over a well-bedewed surface, makes the air rather chilly. In January, the cold at this hour is sometimes so intense that, in sheltered situations, the grass and other low vegetation are covered with hoar frost, and films of ice are formed on small shallow pools of water. By an artificial arrangement of shallow vessels filled with water, and protected both from the terrestrial heat, and from the warmer strata of air in the atmosphere, ice is easily formed in January and February. Throughout the day, in the month of January, the ~~air~~ ^{wind}, when it blows from the west, is parchingly dry and cold, and neutralizes the effects of the sun's rays on the body: but in sheltered spots, the mid-day sun has even at that season considerable power. Fires are generally required to make a house comfortable in part of December, in January and in February. During this season, the fruits and vegetables of Europe come to perfection.

March, April, May and June are the hot months. In March, the days become warmer, and exposure to the sun is unpleasant and injurious to the European constitution; and it is found necessary to exclude the external air from the house, about an hour after sunrise, and to keep the venetians open at night. The mornings are in general pleasantly cool, till the middle of May. The hot winds commence, sometimes in March, but usually not till April. About eight or nine o'clock in the morning, the wind gradually rises in force; and, should it begin from the east, the wind generally lulls about noon, and then blows with gradually increasing strength from the west, carrying along with it clouds of a fine light grey sand, which insinuates itself into every crevice, and which is so hot and dry, that articles of furniture exposed to its influence are speedily warped, and cracked. The leaves of the trees, and of such shrubs as can bear the heat, are covered with this dust, which obscures the horizon, and gives a light greyish aspect to the whole sky, while the flood of sunshine, that is poured upon the earth, resembles a continued rain of lightning, rather than the gentle radiance, with which more temperate regions are blessed. At this time, all animals seek the shade. The European secures his dwelling, and its inmates from the inclemency of the season, by admitting the air, filtered, and cooled twenty or thirty degrees, through wetted skreens, constructed of the roots of the khaskhas grass, (*andropogon muricatum*,) sometimes connected with an apparatus, like a winnowing machine,* for the purpose of maintaining a steady blast of air. In default of such

* To Dr. Ranken, Civil Surgeon at Delhi, belongs the merit of having, in 1824, introduced this machine, to which he gave the name of thermantidote. He adhered to the usual diameter of four feet, given to the winnowing machine,

a contrivance, the air in a room is agitated by large fans suspended from the ceiling, or from the tops of the walls. Towards sunset, the wind almost always abates, so as to admit of an airing being taken without discomfort. It is very rarely that the hot wind continues to blow all night, as it sometimes does on the banks of the Ganges.

Occasionally, the wind continues at this season to blow from the east, during the whole day. At such times, the air is more free from dust, but it is clogged with watery vapour, brought from the Indian Ocean, or from the swamps of Bengal, and Asām. The heat is not thermometrically so great, but is equally and sometimes more oppressive, from its clammy dampness. During an east wind, the tattī, or wetted skreen above mentioned, rarely lowers the temperature so much, as 10 degrees.

Frequent alternations of east and west winds are usually accompanied, especially towards the evening, by a pretty general haze over the sky, deepened towards the horizon. The calm, which intervenes

in Europe: but the resistance opposed by the air to four fans of this size, and of the ordinary width of three or four feet, worked by a winch of 14 inches radius, is so slight, that much power is uselessly expended by the person, who works the machine, in moving with due rapidity the weight of *his own arms*:—the handle runs away from him. To remedy this defect, I in 1833 constructed several thermantidotes with a diameter of eight feet, and carrying eight fans of painted cloth stretched upon their frames, which were slightly bent into a hyperbolical spiral. These answered very well, and the construction is still in use, in the neighbourhood of Benares. In the course of the next year, however, I adopted a contrivance, which though seldom used is mentioned in Fergusson and Martin's mechanical works,—a wheel and pinion without teeth, and faced with thick leather,—which answers extremely well. The fans may be six in number, with a diameter of five feet, and should not exceed three feet in breadth. The best diameters of the wheel and pinion are 30 inches, and 9 inches respectively; the face of the wheel being 4 inches in breadth, so that the leather may not wear out rapidly, and turned to a truly cylindrical shape, so that the surfaces may work smoothly and without any noise whatever.

between these changes, sometimes occasions an almost insupportable sensation of stifling heat.

The sudden squalls, called north-westerns, occur during this season. They come on at all hours, and sometimes with only an hour's warning, signified by the appearance of dense thunder-clouds. Usually, however, they come on in the afternoon, and are often preceded for a day or two by the appearance, each evening, of a dense bank of clouds in the northern horizon, which is occasionally illuminated with faint flashes of lightning, and which is dispersed during the night. The occurrence of the squall is frequently, just after the prevalence of an easterly wind, which gradually abates as the storm is seen to advance from the north-west. Its approach is frequently combined with circumstances of considerable grandeur. The low, sharply-defined, black cloud, which occupied nearly one-half of the horizon, is towards the centre gradually raised into a gloomy arch, which rapidly extends towards the zenith, its summit resembling the overhanging crest of a gigantic breaking wave, while its lower portion is sloped downwards and forwards into a plane, inclined at half a right angle, to the earth's surface. When the sun is at a sufficient elevation to shine upon the face of the advancing cloud, this is found to be of a reddish-brown colour, consisting chiefly of the disintegrated sandstone probably of Rājputānā; and a rolling motion is observable in its curling summit, like the smoke of artillery. When the storm is about a mile distant, a dead calm prevails. As it comes nearer, partial eddies of wind catch up the dust and leaves, and whirl them aloft; and the temperature of the air sinks twenty or thirty degrees. A continued roll of thunder

had been heard, from the first appearance of the storm, and has constantly increased. It is now suddenly mixed with the rushing sound of the wind, and every thing is enveloped in dust, which is sometimes, (as during the great storm of 1827, which lasted more than an hour,) so thick, as to cause the most intense degree of darkness. In some of these storms, no rain falls; and they are then called *dry north-westerns*: but generally the dust is mingled with large drops of rain, which occasionally falls in considerable abundance. The violence of the wind sometimes causes great damage to buildings, and to trees, especially fruit-trees; and, when the storms occur during the spring-harvest, now and then sweep away the produce of whole fields. In some rare cases, which, however, occur every year, hail instead of rain accompanies the storm; the hail falling in masses of various diameters, up to an inch, destroying tiled roofs, and breaking off twigs and the leaves of trees: the lightning also is frequently fatal to life. As the storm moves off, the face of nature shines forth with renovated beauty, the green trees being brightly relieved against the deep violet of the departing clouds: the air is cooled, and its lower strata, by dilution, purified of the noxious vapours, which had there accumulated, before this salutary convulsion.

During the long-continued absence of north-westerns, the uninterrupted absorption of heat, by the earth's surface, raises the temperature of the lower strata of the atmosphere to a degree, which is injurious to life:—all animal and vegetable nature droops. After the 20th of May, the south-west monsoon begins to be felt, in a fall, of rain, (called the Ch'hotā Barsāt or lesser rains,) which formerly used to continue about a week, but which, of late years, has been very irregular in its

occurrence and duration. From the beginning of June, the air is often oppressively sultry, particularly during the calms and changes of wind, which frequently happen at this season. During the height of the hot winds, (lūk) travellers occasionally fall down dead from the heat. In former times, wealthy and religious individuals, (not the Government) planted trees, and maintained wells at the sides of the roads, with attendant brahmans to supply water to the wayfarer. I have heard old inhabitants of Oud'h describe the gradually increasing power of the hot winds, and the corresponding failure of rain, as resembling, in their steady, though hardly perceptible progress, the increasing length of the day towards the summer solstice.

The rainy season includes the months of July, August, September and October, with about one-half of June. It commences after the 9th of this month, generally about the 15th, but sometimes not till near the end of the month. It frequently commences with very heavy rain; from eight to ten inches falling within the first 48 hours, and being accompanied by a high wind, which drives it violently against the perishable earthen walls of the huts of the natives, and, when they are not protected by hurdles, brings many of them down, in a few hours. The united wind and rain sometimes uproot trees, especially trees planted in the loose, and easily softened soil of a garden. When the first heavy fall of rain begins to abate, the flat country appears dotted with pools of water, and intersected with broad shallow streams, which are soon united at the heads* of the branching ravines, and are by these

* These nascent ravines, when formed in a hard kankar soil, present the most beautiful and accurate miniatures of an Alpine region; shewing the long central ridge, with its lateral branches and sub-branches, and their corresponding plains, vales, valleys and ravines, all in due gradation and relief.

channels conducted into the beds of the permanent nālās, and rivers. It is observed, that the heads of these ravines branch out, and extend further and further into the level country every year, the principal undermining, and abrasion of the soil taking place at the small cascade formed by the water, when quitting the plain for the channel of the ravine, which may be from one to ten feet lower than the plain itself.* Much of the soil, which has been loosened, during the preceding hot winds, is thus washed into the rivers, which are thus loaded with a greyish yellow mud. The rapid evolution and decay of vegetation, in the course of, and after the termination of the rains, have already been noticed.

The first fall of rain produces a very refreshing change in the atmosphere : but the sun, even when subdued by a hazy state of the air, still has considerable power, and is not encountered with impunity. During calms, the heat is occasionally oppressive, even in the house, when the means above referred to, for obviating it, are not resorted to : generally it is necessary for comfort to continue their use, until the beginning of November. The rains generally cease in October, and are succeeded by an interval of warm weather, which gradually becomes temperate and cold, as the sun recedes towards the south. When the rains break up in September, the weather becomes hot, and insalubrious ; the exsiccation of the water-courses, and marshes, then going on with great rapidity, and with much disengagement of miasm.

* The continual extension of these ravines is a serious injury to the convenience, and salubrity of many of the large military stations on the banks of the Ganges. They might be filled up with earth, from the adjoining surface, and prevented from again forming, by building up their embouchures, and other principal changes of level, either with solid brick rivetments, or, what would be better, with large rough masses of stone. The principal fall of water would run over these structures, which could easily be made strong enough to suffer no abrasion or displacement.

This description of the course of the seasons, allowing for the lower temperature of Oud'h, is generally applicable to the Gangetic plain, from Patnā westwards.

CHAPTER IV.—SOILS.

The soil of the southern portion of Oud'h is, in general, light, there being a preponderance of siliceous and calcareous earth, and the latter existing, not in the soft state of marl, but in the hard unyielding form of kankar. No portion of rock, larger than a grain of sand, is to be found in the original soil; but the beds of the rivers sometimes contain small bits of pebble brought from the northern mountains,* along with their sands, which are almost exclusively composed of felspar, hornblende, quartz, and mica, and which form an interesting microscopical object. The kankar usually occurs in limited horizontal layers; and, if not constituting the surface of the ground, is generally, though not always to be found, on digging six or eight feet. In several parts of the Gūmti, it forms a barrier across the stream, and in the dry season causes some delay in the passage of boats having keels, or drawing more than three feet of water. One of these barriers is situated at the cantonment of Sultanpūr, and rises two or three feet above the level of the river, in the dry season: but there is a

* I know not Hamilton's authority for stating, in his description of Hindostan, that lapis lazuli is found in Oud'h.

breach in it, where the water is always four feet deep.* The kankar, where it occurs in masses, is extremely cavernous, and seldom possesses the crystalline texture, which belongs to the kankar found, in other parts of the country. It is particularly abundant along the banks of the rivers, chiefly on their right banks.

The rivers, especially the Gūmtī and Tons, supply a considerable quantity of shells, which afford a beautiful mortar, like that of Madras, but which is never used by the natives as manure, in siliceous soils, which would be improved by it; although they universally practise manuring with decomposed animal, and vegetable remains, collected round their villages.

In many places, kankar constitutes the surface of the soil; and, where particularly hard, acquires a permanent coating from a dark green lichen, which becomes black, as it dries, with the departure of the rains.

The sandy soils, called ūsar, frequently contain, in various proportions, large quantities of sulphate, muriate and sub-carbonate of soda, and nitrate of potash; which naturally effloresce, in great abundance, during the cold season, and which are collected and purified, by the natives of the country.

In some places, probably the sites of ancient forests, the soil is a rich dark loam, and of considerable depth.

* The river at this spot offers a favorable place for bathing, after the rains and during the hot weather. An officer of the 63d, when thus engaged, observed that the kankar, where submerged, is covered to the depth of more than half an inch with a soft greyish incrustation, which is closely moulded on the nodules of kankar, like sponge. It has an animal odour, and is ~~probably~~ the nidus of some animalculi, like those of sponge and coral.

A similar soil is occasionally observed, near the beds of the Ganges and Déohā, alternating with strata of stiff clay, variously coloured. Patches of yellow clay are also found dispersed over the country; and clayey soils are thought the best by the inhabitants, which shews, that this earth hardly ever occurs, in too great proportion. Soil which cracks very deeply, during the dry season, from its abundance of clay, is especially preferred for rice crops.

Between the Gūmtī and Ganges, the light arable soil is, here and there, interspersed with patches, two or three miles in diameter of ūsar land, covered during the rains with grass, which is speedily withered by a day or two's sunshine. This otherwise barren soil yields an abundant efflorescence of soda (réh), which is used by the washermen only. When the effloresced salt is observed to possess a cooling property, or a saline taste, it is then called lunār, and is carried off by the luniyas, and by them manufactured into saltpetre, and culinary salt.

The soil of the Salon purgana is particularly good, containing little pure sand or kankar, and producing every variety of grain. The few patches, also, of *usar* land, which it includes, are rich in salt and nitre.

But the richest soil, in the south of Oud'h, is found near Jāyis, Rampūr, and Manikpūr. Along the borders of the Sai, also, beyond the immediate sandy banks, which are each half a mile in width, and free from kankar, the soil is a productive yellowish loam.

CHAPTER V.—NATURAL HISTORY.

SECTION 1.—GEOLOGY.

The whole of the southern part of Oud'h being an alluvial country, there is nothing in its geological structure to attract attention, beyond the particulars, which have been detailed, in the preceding portions of this memoir. The only minerals which it presents are carbonate of soda, muriate of soda, sulphate of soda, nitrate of potash, and carbonate of lime; some of which will be more particularly mentioned, under the head of manufactures.

SECTION 2.—ZOOLOGY.

The most remarkable wild animals, which occur, are the wolf, hyæna, jackal, fox, hare, deer, nilgā'e, wild hog, porcupine, otter, mongoose, squirrel, mouse, field-mouse, rat, musk-rat, two species of wild cat (the katās and ban-bilao), the bat, flying-fox, and porpoise. No tigers nor wild buffaloes are seen to the south of Lak'h-nau, except in the high j'hau jangal, which clothes the kankar banks of the Ganges in Bainswārā, and in one or two of the larger forests of the interior.

The wolf here probably causes as much loss of human (chiefly infant) life, as in the Agra district. During the years 1835, 1836, and 1837, upwards of a dozen children were thus carried off, and destroyed, from the small bazar attached to the cantonment of Sultānpur. A mischievous superstition frequently prevents the

inhabitants of Oud'h from destroying these animals, it being said, that the wolf's blood remains upon the slayer's house, "which shall not stand:" and, accordingly, their dens (bat'hā) are observable in the sides of the ravines, throughout the country, colonies of them attaching themselves to particular villages, as their hereditary prey. A full grown wolf stands ten hands in height. He will singly attack, and kill a strong man, if unarmed, but keeps at a distance, if the man have a stick or other weapon, in his hand. When there are three or four of them together, they will attack an armed man, surrounding him, and one of them springing on his back, the instant that his attention is diverted to the other side. From some ravines, where they are numerous, they emerge and hunt in packs of twenty or thirty. They have a dread of horses, and never attack them, whether carrying a rider or not. They avoid grown horned cattle also, but will attack calves. They never venture into villages, except at night, when they frequently carry off children. Their number does not, within traditional recollection, appear to have undergone either increase or diminution. They are never entrapped by the people, but are sometimes found swimming in nālās, and speared, or are caught unawares, and shot.

The hyæna also carries off many children. Wild cats live in the jangals, but enter the villages at night, and sometimes kill infants. The unowned or pariyā dogs do not live in the jangals: they always keep near villages. Deer are found in the larger jangals only, and are particularly numerous in the lān jangal, near Parome. Bangaili bulls and cows are found near Harhā, and nīlgāes abound in the Harhā, and Pālī

jangals. Porpoises are seen, in the Gūmti, during the rains only.

The most remarkable birds are the adjutant, s̄aras, partridge, quail, vulture, hawk, kite, crow, raven, jay, parrot, (excessively numerous and destructive to crops), paddy-bird, maina, swallow, sparrow, dove, cuckoo, koel, lark, kingfisher, (many splendid species), wild goose, wild duck, woodpecker, and humming-bird. The number and variety of singing birds at Sultānpūr, probably attracted by the shelter, the fruit and insects of the gardens, are strikingly great. Game-birds are rare, in that vicinity.

Of the reptile class, the two species of alligator occur in the Ganges, and Deóha, at all seasons, but venture into the smaller rivers, during the rains only. Snakes and lizards of various kinds abound. The only well-known venomous snakes are the kārāit, and the cobra di capello. The biskoprā, which corresponds with the *Tupinambis Bengalensis* of Daudin,* is also found here; and, as elsewhere, has the groundless reputation of being poisonous.

Of the crustaceous and insect classes, the chief examples are the crab, prawn, scorpion, centipede, locust, white, black, and red ant, flea, bug, house-fly, mantis, musquito, sand-fly, eye-fly, with beetles, crickets, and grass-hoppers of various kinds. If the doors of a house be left open, during a calm evening in the rains, every light is surrounded by hundreds of insects of many

* His description, however, applies to the female only. The male is yellow below, the throat not so distinctly dotted, and the spots on the back are disposed in transverse bands, consisting alternately of blackish spots and of white spots surrounded by a circle of a darker ash colour than the general ground.

different species. The cochineal insect is sometimes seen on the prickly pear bush.

SECTION 3.—BOTANY.

Under the section "natural vegetation," there is an enumeration of the principal jangal trees. The following list comprises all the plants, (with a few animal, and mineral substances), whether indigenous or imported, that are used in the medical practice of the natives of this part of the country. The substances are arranged in the alphabetical order of the names most generally used, whether Hindī, Persian or Arabic; and the English and systematic synonyms are added, with a specification of their commercial sources, the parts of the plant employed, the price per *ser*, the virtues attributed to them, by the *native practitioners*, and the diseases, in which they are used.

Abrak kākīyā. Makrī kā jālā. Spider's web. *Indigenous*. Hemorrhage.

Afīm. See Koknār.

Agar, ARAB. Ud, HIND. Morinda citrifolia. *Tarāi*. Wood. 8 anas. Tonic. Appetizing.

Agīyā g'hās. Lemon-grass. *Indigenous*. Leaf. 2 anas. Thirst in fever.

Ajwain. Dill. Anethum graveolens. *Indig*. Seed. 1½ ana. Catarrh. Fever.

Ajwain Khorāsānī. Henbane. Hyosciamus niger. *Indig*. Extract. Narcotic.

Ajmūd. Bishop's weed. Sison Ammi. *Indig*. Seed. 4 anas. Aromatic. Rheumatism: fever: spleen: Catarrh.

Akarkarhā mīṭhā. *Arabia*. Herb. Asthma : Catarrh : aphrodisiac : (an irritant poison).

Akarkarhā talakh. *Anthemis Pyrethrum*. *Indig.* Herb. 6 rupees. Virtues as above, but weaker.

Akas bél. *Cuscuta reflexa*. *Indig.* Lichen. 1 rupee. Juzām.

Alsī. Linseed. *Linum usitatissimum*. *Indig.* Seed and oil. 9 pie. Infusion demulcent.

Amā haldī. *Curcuma*. *Indig.* Root. 1 rupee. Vulnerary.

Amal béd. *Indig.* Branches. 1 rupee. Acid : appetizing : thirst.

Amaltās. Purging Cassia. *Cassia fistula*. *Indig.* Pods. 6 anas. Purgative.

Amlā sār. Crystallized Sulphur. *Naipāl*. 8 rupees. Scabies.

Anār. Pomegranate. *Punica granatum*. *Indig.* Rind of root : fruit. Vermifuge in tænia. Diarrhœa : leucorrhœa : menorrhagia. Fruit in fever, to quench thirst.

Anbū us sālīb, AR. Janglī makó, H. B'hat konyā (fox grape) H. *Solanum nigrum*. *Indig.* Distilled water of the plant. Anodyne. Dropsy : jaundice.

Angūr. Grape. *Vitis vinifera*. *Indig.* Fruit. 1 rupee. Thirst.

Aonlā. See ~~X~~ālā nīmak.

Asgand Nagaurī. *Physalis flexuosa*. *Indig.* the best from Nagaur in Rājwārā. Root. 6 anas. Tonic : gleet : aphrodisiac.

Bāb'hrang. *Embelia ribes*. *Indig.* Seed. 4 anas. Cathartic. Vermifuge.

Babūl kə gond. Gum arabic. *Acacia arabica*. *Indig.* Gum. 3 anas. Gum as a demulcent in catarrh,

dysentery and gonorrhœa. Flower, as an aphrodisiac, and in gleet. Bark, in infusion, as an astringent for the gums.

Bach khusbū. *Acorus calamus*. *North-west*. Root. $1\frac{1}{4}$ rupee. Splenitis: Carminative.

Bādām. Almond. *Amygdalus communis dulcis*. *North-west*. Kernel. 13 anas. Esculent: demulcent.

Bādrang. Cucumber. *Indig*. Seed. 10 anas. Di-metic: lithontriptic: febrifuge.

Bahérā. Belleric myrobalan. *Terminalia belerica*. *Indig*. Fruit. 1 ana. Astringent: Collyrium: aphrodisiac.

Bahman safèd. *Indig*. Root. 24 rupees. Aphrodisiac: scabies.

Bahman surkh. Same as above, but weaker, 16 rupees.

Bakain. *Melia sempervirens*. *Indig*. Leaf. 6 pie. Bitter: infusion in fever, and as a bath for inflammatory swellings.

Bakchī. *Conyza* or *serratula anthelmintica*. *Indig*. Seed. 4 anas. Febrifuge: (narcotic?): scabies.

Banafshā. *Viola serpens*. *Indig*. Flower. $1\frac{1}{2}$ rupee. In inflammation of the vocal passages.

Bans lochan. Tabasheer from the *Bambusa arundinacea*. *Faizābād*. 80 rupees. Aphrodisiac.

Barm dandī. *Centaurea*. *Indig*. Herb. 1 rupee. Aphrodisiac.

Barmī. *Indig*. Herb. Roborant for stomach and liver.

Békh badiyān. Anise root. *Anisum sativum*. *Indig*. Root. 2 anas. Dysentery: diuretic: aphrodisiac.

Békh keonra. *Pandanus odoratissimus*. *Indig*. Root. 2 anas. Aphrodisiac externally.

Békh khitmī. *Althæa rosea*. *Indig*. Flower, seed and root. 4 anas. Expectorant.

Békh sahjanā. *Hyperanthera morunga*. *Indig.* Gum-resin. 5 rupees. Dyspepsia : emetic in poisoning from opium.

Békh sausan. Iris. *Indig.* Root. 8 anas. Pulmonary.

Bél. Bengal quince. *Aegle marmelos*. *Indig.* Fruit. Unripe fruit demulcent in diarrhœa.

B'hang. Hemp. *Cannabis sativa*. *Indig.* Leaves. 2 anas. Intoxicating.

B'hangrā. *Eclipta prostrata*. *Indig.* Grass. 4 anas. Aphrodisiac : dye for hair.

Bhat konya : See Anbu us sālīb.

B'hélāwā. Marking nut. *Semecarpus anacardium*. *Indig.* Fruit. $2\frac{1}{2}$ anas. Poisonous in its raw state : carminative when prepared.

Bīhī dāna. *Pyrus cydonia*. *Indig.* Seed. 7 rupees. Demulcent in catarrh and gonorrhœa.

Bijband or Tukhm baryārā. *Indig.* Seed. 6 anas. Astringent : tonic.

Bilaiyā kand'h. *Indig.* Root. 4 anas. Aphrodisiac.

Bilangā or Tukhm bilangā (vulgò Tukmālangā). *Dra-canphalum Royleum*. *Indig.* Seed in infusion. 8 anas. Supposed tonic.

Billī lotan. *Ocimum*. *Indig.* Seed. 1 rupee : Nervine : said to throw a cat into convulsions when rubbed on its back.

Bīr bahóti. *Mutella occidentalis*. *Indig.* Insect. 1 rupee. Aphrodisiac externally.

Chakaura. *Cassia sophora*. *Indig.* 2 anas.

Chambéli. Jasmine. *Jasminum grandiflorum*. *Indig.* Distilled water of flowers. 8 anas. Aromatic. Tonic.

Chand syr : See Hālim.

Ch'harilā. *Lichen rotundatus*. *Indig.* Lichen. 6 anas. Aromatic : Nervine : Aphrodisiac.

Chīraiya kand'h. *Indig.* Root. 8 anas. Aphrodisiac.

Chirētā. *Gentiana chiraiyita. Naipāl.* Wood. 5 anas.

Tonic : febrifuge.

Chīta. *Plumbago zeylanica. Indig.* Herb. 8 anas.

Febrifuge : fresh plant epispastic.

Chob chāp. *Indig.* Wood. 4 anas. Bitter : Aphrodisiac.

Chob chīnī. China root. *Smilax Chinensis. China.*

Wood. 4 rupees. To purify the blood. (Substitute for Sarsaparilla).

Chob maidā or Gaj pīpal. *Pothos officinalis. Indig.*

Wood. 4 anas. Tonic : Aphrodisiac.

Chukandar, H. P. Salak, AR. *Beta vulgaris. Indig.*

Root. 2 anas. Jaundice.

Chūnā. Lime. *Indig.* 1 ana. Lime-water in cholera and stone. With oil for burns.

Dāl chīnī or Dār chīnī. Cinnamon. *Laurus cinnamomum. East India Islands and Naipāl.* Bark. 8 anas. Carminative.

Dām ul akhwin, AR. Rang barap, H. Gum. 8 rupees.

Bombay Jaundice. Diarrhœa. To ulcers.

Dār hald. *Berberis asiatica. Indig.* Wood. 8 anas.

Injection in gonorrhœa.

D'hāk or Palās. *Butea frondosa. Indig.* Flower, seed and gum. 4 anas. Astringent in dysentery.

Dhaniyā. Coriander seed. *Coriandrum sativum. Indig.*

Seed. $1\frac{1}{2}$ ana. Carminative : Astringent : Tonic,

Dhātūrā. *Datura stramonium. Indig.* Herb. 1 ana.

Intoxicating : asthma : to break off the habit of opium eating.

Gājar. Carrot. *Daucus carota. Indig.* Seed. 6 anas.

Diarrhœa : Aphrodisiac.

Gandanā. Leek. *Allium porrum. Indig.* Seed. 1 rupee. Tonic : expectorant.

- Gand'hak. Sulphur. *Naipāl*. 6 anas. Scabies.
- Gāo zabān. Bugloss? *Indig*. Herb. 1 rupee. To purify the blood : tonic : diuretic.
- Gerū. Red ochre. *Naipāl*. 2 anas. In ointment for wounds.
- G'horbach. *Indig*. Root. $1\frac{1}{4}$ rupee. Carminative and in spleen (to horses).
- G'humchī or Rattī. *Abrus precatorius*. *Indig*. Seed. 2 rupees. Aphrodisiac externally.
- Gok'hrū. Small caltrops. *Tribulus terrestris*. *Indig*. Fruit. 5 anas. Diuretic in gonorrhœa.
- Gol mirch. Black pepper. *Piper nigrum*. *Naipāl and Asām*. Seed. 9 anas. Aromatic : febrifuge : spleen.
- Gugul. *Amyris agalocha?* *Indig*. Gum. 1 rupee. Hemorrhoids.
- Gulāb. Rose-water. *Rosa centifolia*. *Jaunpūr*. Distilled water. 1 rupee. Tonic.
- Gul i khairū. Chinese mallow? *Malva chinensis?* *Indig*. Flower. 8 anas. Refrigerant : gonorrhœa.
- Gul i ward. *Rosa damascena*. *Indig*. Petals. 4 anas. Febrifuge : Aphrodisiac.
- Gul nilufar. *Nelumbium speciosum*. *Indig*. Flower. 8 anas. Aphrodisiac.
- Gurch. (~~A~~ parasitical plant, the best found on Nīm trees). ~~Menispermum~~ *glabrum*. *Indig*. Herb. 2 anas. Tonic : febrifuge.
- Haldī. Turmeric. *Curcuma longa*. *Indig*. Root. 2 anas. Vulnerary.
- Hālim or Chand sūr. Cresses. *Lepidium sativum*. *Indig*. Herb. $1\frac{1}{2}$ ana. Vulnerary.
- Harrā (bārā). Myrobalan. *Terminalia citrina*. *Indig*. Fruit. $2\frac{1}{2}$ anas. Purgative : collyrium in chronic ophthalmia.

- Harrā** (ch'hotā). *Indig.* Fruit. 4 anas. Purgative in dysentery : collyrium in chronic ophthalmia.
- Hartāl** or **Gobra**. Yellow orpiment. *Naipāl*. $1\frac{1}{2}$ rupees. Rheumatism. Tabkī from *Naipāl*, 5 rupees.
- Hing**. Assafœtida. *Ferula assafœtida*. *North-west*. 3 rupees. Carminative.
- Hulhul**. *Cleome viscosa*. *Indig.* Leaf and seed. 4 anas. Leaf, bruised, in headache. Seed Aphrodisiac.
- Ilāchī** (barī). Cardamoms. *Amomum racemosum*. *Indig.* Seed. 7 anas. Aromatic.
- Ilāchī** (ch'hotī). *Elettaria cardamomum*. *Gujrāt*. Seed. 7 rupees. Aromatic : stronger than the above.
- Imli**. Tamarind. *Tamarindus Indica*. *Indig.* Pods. 2 anas. Acidulous : thirst.
- Indar jau shīrīn**. *Echites antidysenterica*. *Indig.* Seeds. 2 rupees. Aphrodisiac : diuretic.
- Indarjau talakh**. *Indig.* 8 anas. Aphrodisiac : diuretic.
- Indrāyan**. *Cucumis colocynthis*. *Colocynth*. *Indig.* Pulp. 3 rupees. Cathartic in pulmonic affections and in elephantiasis Græcorum.
- Isafghol**. Spogel seed? *Plantago ispaghula*. *Indig.* Seed in infusion. 4 anas. Demulcent in dysentery and gonorrhœa.
- Ispand**, p. **Harmal**, A. *Corchorus capsararis*. *Indig.* Seed. 8 anas. Narcotic : rheumatism.
- Jā'ep'hal**. Nutmeg. *Myristica moschata*. *Islands*. 9 rupees. Aromatic : diarrhœa : aphrodisiac.
- Jamālgotā**. Croton seed. *Croton tiglium*. *Naipāl* tarā'ī. Nut and oil. $1\frac{1}{4}$ rupees. Cathartic.
- Jawā k'hār**. Impure potash from the ashes of the plantain or musa paradisaica. *Indig.* 6 anas. Antacid : deobstruent : long used with lime juice, by

the natives, as an effervescing draught to allay vomiting.

Jawāsā. Hedysarum alhagi. *Indig.* Herb. 4 anas. Externally in vesicular eruptions of children : internally in gonorrhœa.

Jawatrī. Mace. Myristica moschata. *Islands.* 10 rupees. Aromatic : diarrhœa : aphrodisiac.

Jatāmāsī. Valeriana jatamansi. *Indig.* Root. 8 anas. Aromatic. To disguise taste of medicines. Smoked with tobacco.

Jét'hī mad. Gunj. Abrus precatorius. *Indig.* Extract and decoction. $1\frac{1}{4}$ rupee. Demulcent in catarrh and gonorrhœa.

Jintiyāna Rūmī. Pak'hān béd. Gentiana (lutea?). *Levant.* Tonic.

Kabāb chīnī. Cubebs. Piper cubeba. *Faizabad.* Seeds. $1\frac{1}{4}$ rupee. Tonic : aphrodisiac : gonorrhœa.

Kachūr. Curcuma zerumbet. *Indig.* Shrub. 2 rupees. Aphrodisiac.

Kaddu. Pumpkin. Lagenaria vulgaris. *Indig.* Seed. 4 anas. Tonic.

Kā'ephal. Myrica sapida. *Naipāl.* Bark. 4 anas. Aromatic.

Kāfūr. Camphor. Laurus camphora. *East India Island.* 4 rupees. Stimulant : rubefacient.

Kāghazī nīm. Lime. Citrus medica. *Indig.* Fruit. 3 anas. Fever : thirst : dried rind of unripe fruit : tonic.

Kahrubā. Oriental anime. Vateria Indica. *Tarā'ī.* Gum. $1\frac{1}{2}$ rupee. Tonic : astringent.

Kahū. Lactuca sativa. Lettuce. *Indig.* Seed. 8 anas. Narcotic.

Kālā dāna. Ipomœa cærulea. *Indig.* Seed. 4 anas. Purgative.

- Kālā nīmak.** Black-salt. Prepared from muriate of soda and the fruit of *Phyllanthus emblica* or emblic myrobalans. *Indig.* 6 anas. Tonic: purgative: purifying.
- Kalapnāt'h.** *Indig.* Plant. 4 anas. Bitter: ague: chronic dysentery.
- Kalaunjī or Mangrailā.** *Nigella Indica.* *Indig.* Seed. 4 anas. To increase milk.
- Kālī zīrī.** Fennel. *Nigella sativa.* *Indig.* Seed. 3 anas. Aromatic: counter-irritant in glandular swellings.
- Kamīlā.** *Rottlera tinctoria.* *Indig.* 8 anas. Root. Vermifuge.
- Kāmraj.** *Sonchus.* *Tarā'ī.* Twigs. 8 anas. Aphrodisiac.
- Kandrā.** *Erythronium Indicum.* *Indig.* Root. 1 rupee. Expectorant. (Substitute for squills.)
- Kangahyā.** *Indig.* Leaf. 4 anas. Given internally to stop bleeding from hemorrhoids.
- Kankol mirch.** *Momordica mixta.* *Indig.* Seed. 8 anas. To ulcers.
- Kanwal gattā.** *Nymphaea nelumbo.* *Indig.* Seed 4 anas. Tonic.
- Kasīs.** Protosulphate of iron. Prepared from sulphur and iron in every bāzār. 8 anas. Mordant: spleen.
- Kasnī.** *Indig.* Seed. 4 anas. Tonic: jaundice.
- Kat'h.** Catechu from the khair tree. *Simosa catechu.* *Indig.* Extract. 6 anas. Astringent: wash in gonorrhœa.
- Katīrā.** See Sahjanā.
- Katkalejī.** *Cæsalpina bonduccella.* *Indig.* Nut. 4 anas. Tonic: febrifuge.
- Késar or Zafrān.** Saffron. *Crocus sativus.* *Delhi.* Flower. 70 rupees. Ophthalmia.

- ✓ **Khāksīr.** *Indig.* Seed. 8 anas. Febrifuge : to cause obesity.
- Kharātīn.** An earth-worm. *Indig.* Hot drawn oil. 4 anas. Aphrodisiac externally.
- K'harī mattī.** Chalk. *Naipāl* (and *Rajmahāl??*). 5 anas. Astringent in diarrhœa.
- Kharī nīmak.** Carbonate of soda. *Indig.* 4 anas. Antacid.
- Khiyār.** A cucumber. *Indig.* 4 anas. Diuretic : lithontriptic : febrifuge.
- Kirmiz.** Cochineal (*grana sylvestre*). *Coccus cacti.* *Indig.*
- Kiwanch (unde) Cowhage.** *Dolichos pruriens.* *Indig.* Seed. 4 anas. Aphrodisiac.
- Koknār or Afīm.** Opium from the *Papaver somniferum.* *Indig.* Inspissated juice. Narcotic, and astringent : 4 rupees. Seed, $2\frac{1}{2}$ anas, edible ; in contusions : demulcent in catarrh. Oil, 5 anas, in ointments. Poppy heads in anodyne embrocations.
- Kuchila.** *Nux vomica.* *Strychnos nux vomica.* *Indig.* Seed. 4 anas. In rheumatism, and to break the habit of opium-eating.
- Kulfa** (properly **Khurfa**, AR.) *Indig.* Seed. 5 anas. Refrigerant : diuretic.
- Kulinjan.** Pān root. Piper betel. *Indig.* Root. 1 rupee. Febrifuge : appetizing : to restore voice after catarrh.
- Kunjad, P. Til, H.** *Sesamum orientale.* *Indig.* Seed. 3 anas. Demulcent : aphrodisiac. Oil $4\frac{1}{2}$ anas : in ointments.
- ✓ **Kutkī siyāh.** *Indig.* Root. 8 anas. - Insanity : supposed refrigerant.
- Kut shīrīn, and Kut talakh.** *Costus Arabicus.* *Indig.* Root. 1 rupee. Aphrodisiac.

Lablāb or Ishkpecha.

Lahsan. Garlic. *Allium sativa.* *Indig.* Root. 1 ana.

Dropsy : spleen : asthma.

Lāk. Lac from the *Coccus lacca.* *Indig.* 4 anas. Hemorrhoids.

Lāl mirch. Red pepper. *Capsicum pubescens.* *Indig.* Pod. 5 anas. Aromatic : in dropsy as a counter-irritant.

Laung. Cloves. *Eugenia caryophyllata.* *Islands.* Buds. $1\frac{3}{4}$ rupee. Aromatic.

Lésórā. *Cordia myxa.* *Indig.* Unripe fruit. 4 anas. Unripe : thirst : gonorrhœa : aphrodisiac. (Ripe fruit esculent.)

Lobān. Olibanum. Frankincense. *Boswellia serrata.* *North-west.* Gum. 6 anas. Hæmoptysis : astringent : diuretic.

Lod'h. *Symplecos racemosa.* *Kābul.* Bark. 5 anas. Ophthalmia.

Mādār. *Asclepias gigantea.* *Indig.* Root and flower. 2 anas. Root in juzām. Flower as a sedative in catarrh.

Mā'im. *Indig.* Grass. 4 anas. Decoction in prolapsus uteri.

Mā'inphal. *Vangueria spinosa.* *Indig.* Fruit. 2 anas. Emetic.

Mā'insil. Realgar : red arsenic : red orriment. $3\frac{1}{2}$ rupees. Scabies : caustic : applied on a thread to cut off tumours.

Majīt (vulgo manjīt.) Madder. *Rubia mungistha.* *Naipāl and Asām.* Herb. 4 anas. Dye : cosmetic.

Mājū p'hal. Gall nut from *quercus infectoria.* *Persia.* $1\frac{1}{2}$ rupee. Astringent in swollen gums, diarrhœa and menorrhagia.

✓ Māmīran. *Ranunculus Ficaria*. *Arabia*. 8,000 rupees!
Collyrium.

Mārōr p'hālī. *Helicteres isora*. *Indig.* Fruit. 6 anas.
Colic : diarrhoea.

Maru'ā. *Artemisia vulgaris*? *Ocimum pilosum*? *Indig.* Leaf. 4 anas. Aromatic : epilepsy : otitis.

Masfar. Safflower. *Carthamus tinctorius*. *Indig.*
Kernel. 2 anas. Aphrodisiac.

Mastakkī Rūmī. Mastich. *Pistachia lentiscus*. *Europe*.
5 rupees. Tonic : expectorant.

Mehndī. *Lawsonia inermis*. *Indig.* Seed. 4 anas. Refrigerant : astringent in diarrhoea and gonorrhoea.

Mét'hī. Fenugreek. *Trigonella fænugræcum*. *Indig.*
Herb. 2 anas. Aromatic esculent.

Misrī. Sugar. *Saccharum officinarum*. *Indig.* 10 anas. Catarrh.

Mom. Wax from *apis mellifica*. *Indig.* 1 rupee. In ointments.

Muchras. Gum of senwal tree. *Bombax heptaphyllum*. *Indig.* 8 anas. Jaundice : to ulcers.

Mulhatī. Liquorice. *Glycyrrhiza glabra*. *North-west*. 8 anas. Root. Demulcent.

Mūlī. Radish. *Raphanus sativus*. *Indig.* Root and seed 8 anas. Emetic.

Munsī. *Sphaeranthus Indicus*. *Indig.* Herb and fruit. 2 anas. Tonic : gonorrhoea.

Murdār sang. Litharge made in *India* from lead brought from the Hills of *Naipāl*. 1 rupee. Plasters.

Musabbar, AR. Elwā, H. Aloes. *Aloe perfoliata*. *Indig.*
Extract. $1\frac{1}{4}$ rupee. Purgative.

Mushk. Musk. *Viverra civetta*. *Naipāl* and *Asām*.
60 rupees. Stimulant and aphrodisiac.

Mūslī (white and black). *Asparagus sarmentosus*. *Indig.* Root. 6 anas. Tonic : gonorrhoea : gleet.

- Mushī semal.** *Bombax heptaphyllum.* *Indig.* Root.
 2½ anas. Tonic : gleet : aphrodisiac.
- Nāgar mot'hā.** *Cyperus pertenuis* (rotundus ?) *Indig.*
 Root. 3 anas. Aromatic : nervine : aphrodisiac.
- Nak chiknī.** *Artemisia sternutatoria.* *Indig.* Herb.
 1 rupee. Errhine : stimulant.
- Nar kachūr.** *Indig.* Root. 6 anas. In catarrh, sup-
 posed to moderate expectoration.
- ✓ **Naswat.** *Indig.* Wood. 4 anas. Drastic purgative.
- Naushādar.** Salammoniac from horse-dung. 1 rupee.
 Cutaneous diseases : to allay hunger. *Indig.*
- Nīl.** Indigo. *Indigofera tinctoria.* *Indig.* Leaf. 1
 ana. To dye hair : cholera.
- Nīla t'hot'ha,** H. Tutiya akhzar, AR. Sulphate of copper
 made in *India.* 1½ rupee. Escharotic : emetic.
- Nīm.** *Melia azedirachta.* *Indig.* Leaf. ½ ana. Bit-
 ter : infusion in fever and to inflammatory swellings.
- Nīrbissī.** *Caltha Nirbisi.* *Indig.* Root. 1 rupee.
 Counter-poison after vomiting.
- Nirmalī.** Clearing nut. *Strychnos potatorum.* *Indig.*
 Nut. To clarify water.
- Pak'hān béd.** See Jintiyāna.
- Palang tor : Kamarkas : Sīj.** The milk-bush when
 thirty years old. *Euphorbia antiquorum.* *Indig.*
 Wood. 1 rupee. Substitute for sarsaparilla.
- Pārā.** Mercury. 7 rupees. Syphilis : babies.
- Patāl konhrā.** Root. Sweet. Aphrodisiac.
- Patraj : Téjpat.** Cassia leaf. *Laurus Cassia.* *Naipāl*
and Asām. Leaves. 6 anas. Tonic : nervine.
- P'hālsā.** *Grewia asiatica.* *Indig.* Juice of bark. 2
 anas. (Fruit esculent.) Diuretic in gonorrhœa.
- Phitkidī.** Alum. *Naipāl.* 6 anas. Astringent in
 ophthalmia and swollen gums.

✓ Phūl d'hāwā. *Grislea tomentosa*. *Indig.* Flower. 7
anas. Tonic : gonorrhœa.

P'hūl nakésar. *Indig.* 2 rupees. Aphrodisiac.

Pīpal. Long pepper. *Piper longum*. *Indig.* Seed.
10 anas. Febrifuge : catarrh.

Pīpala mūr. Long pepper. *Piper longum*. *Indig.* 6
anas. Febrifuge : catarrh.

Piyāz. Onion. *Allium cepa*. *Indig.* Root and seeds.
5 pie. Esculent : supposed tonic.

Podīnā. Peppermint. *Mentha sativa*. *Indig.* Infu-
sion and powder. 4 anas. Dyspepsia : fever.

Pūhkar mūl. *Indig.* Shrub. 2 rupees. Aphrodisiac.

Rā'ī. Mustard. *Sinapis ramosa*. *Indig.* Seed and
oil. 2 anas. Seed emetic in cough. Oil rubefa-
cient.

Rāihān or Janglī Tulshī. *Ocimum pilosum*. *Indig.*
Seed in infusion. 4 anas. Demulcent in gonor-
rhœa and dysentery.

Rāl. Rosin from *Chloroxylon dupada*. *Naipāl.* 4 anas.
Astringent in dysentery. For plasters.

Rasaut. Prepared from *Berberis Asiatica*. *Faizābād.*
4 rupees. Epistaxis : hæmorrhoids.

Raskapūr. Corrosive sublimate. *Faizābād.* 9 rupees.
Syphilis.

Ratanjot. *Lithospermum vestitum*. 6 rupees. Oph-
thalmia.

Rènrī. Castor oil plant. *Ricinus vulgaris*. *Indig.* 1
ana. Oil. Purgative.

Réwan chīnī. Rhubarb. *Rheum palmatum*. *China*
and *Khatai*? Root. 6 anas. Laxative : tonic.

Rīt'hā. *Sapindus emarginatus*. *Indig.* Rind of fruit.
2 anas. Violent emetic.

Sābun. Soap from lime. Sajjī mattī and oil or fat. *In-*
dig. 1 rupee. Dysmenorrhœa.

- Safedā Kāsharī. From *Kāshgar*? 10 anas. Plasters.
- Sahar p'hūnkā. Galega. *Indig.* Plant. 6 anas. Tonic: febrifuge: purifying.
- Sahjanā. See Katīrā.
- Sajjī mattī. Sub-carbonate of soda. *Indig.*
- Salājīt. ? *Naipāl.* 4 rupees. Tonic: aphrodisiac.
- ✓Salāwar. *Indig.* Root. 8 anas. Gonorrhœa: aphrodisiac.
- Sālep misrī. Salep. Orchis mascula. *North-west.* Root. Esculent: aphrodisiac.
- Samb'hālū. Vitex trifolia. *Indig.* Leaf. 1 ana. In cataplasm to rheumatic and other inflammatory swellings.
- Sambul. *Indig.* 10 anas. Distilled water. Aromatic: tonic.
- Sambul khār, H. Sumulfār, A. White arsenic. 6 rupees. Chronic ague: juzam.
- Samūdar sok'h. Convolvulus argenteus. *Indig.* Seed. 4 anas. Infusion in gonorrhœa.
- Samūdar p'hal. Barringtonia acutangula. *Hardwār.* Seed and fruit. 4 anas. Ophthalmia
- Samūdar p'hén. Coral. 3 rupees. In foul ulcers, and ulcers in the ear.
- Sanā. Senna. Cassia senna. *Naipāl.* Leaf. 6 anas. Purgative.
- Sang Basrī. From *Basrā.* 1¼ rupee. Mixed with lemon-juice as a collyrium for dimness of sight.
- Sang jarāhat, P. Gao K'harī, H. Steatite. *Naipāl.* 5 anas. Wash in gonorrhœa.
- Sank'h. Shells. *Indig.* 1 rupee. Spleen.
- Sarson. Mustard. Sinapis dictyotoma. *Indig.* Seed. 1 ana. Emetic and expectorant: oil less acrid than that of *S. ramosa.*

Shahd. Honey from *Apis mellifica*. *Indig.* 1 rupee.

In confections.

Shāh tarā, p. Shah taraj, A. (Pit pāprā, H. : but this is rather *Fumaria officinalis*.) *Fumaria parviflora*.

Indig. Wood in decoction. 4 anas. Tonic : febrifuge : purifying.

Shalgham. Turnip. *Brassica rapa*. *Indig.* Seed. 4 anas. Aphrodisiac.

Shangarf. Red sulphuret of mercury. *Lak'hnav.* Syphilis.

Shora. Saltpetre. *Indig.* 1 rupee. Refrigerant : diuretic.

✓ Sīras. *Mimosa serissa*. *Indig.* Fruit. 4 anas. Ophthalmia : scrophula.

Soā. Indian dill. *Anethum sowa*. *Indig.* Plant. 2 anas. Aromatic esculent.

Sohāgā. Borax. *Naipāl.* 1 rupee. Herpes : diuretic. Used as a flux by workers in metal.

Sonf. Anise. *Pimpinella anisum*. *Indig.* Seed and root. $1\frac{1}{2}$ ana. Dysentery : diuretic : aphrodisiac.

Sont'h. Dry Ginger. *Zingiber officinalis*. *Indig.* Root. 10 anas. Aromatic : tonic.

Sugand bālā or Bālā. *Andropogon muricatum*. *Indig.* Root. 4 anas.

Supārī. Betelnut. *Areca catechu*. *Bengal.* 1 rupee. Tonic : aphrodisiac.

Sundal safèd. Sandal wood. *Sirium myrtifolium*. *Indig.* Wood refrigerant : oil aromatic.

Sundal surkh. Red saunders wood. *Pterocarpus santalinus*. *Tarā'ī? Islands.* Wood. 8 anas. Tonic : appetizing : dye.

Surmā. Crude antimony. *Levant.* Black, 1 rupee. White 2 rupees. Ophthalmic : not given internally.

Tagar, H. Asarūn, A. (Substitute for Asarum Europæum.) *Tarā'ī*. Wood. 12 anas. Spleen : hepatitis.

Taj. Cassia bark. Laurus cassia. *Naipāl tarā'ī*. Bark. 4 anas. Aromatic : dysentery.

Tal makhāna. Barleria longifolia. *Indig.* Seed. 6 anas. Refrigerant : gonorrhœa.

Tambākū. Nicotiana tabacum. *Indig.* Leaf. 4 anas. Dropsy : spasmodic affections.

Tik'hur. Curcuma angustifolia. *Indig.* Root. 6 anas. Esculent : tonic : aphrodisiac : substitute for arrow-root.

Tukhm bilangā : See Bilanga.

Tutiya. Sulphate of copper.

Ud. See Agar.

Unnāb. Zizyphus? ——. *Faizabad*. 8 rupees. Febrifuge.

✓ Unt katārā. Echinops sphærocephalus. *Indig.* Herb. 4 anas. Pulmonary.

Zakā ul Baṣar. See Ratanjot.

Zangār. Acetate of copper. Made in *India*. 3½ rupees. Escharotic : paint.

Zirā. Cummin. Cuminum cyminum. *Indig.* Seed. White 6 anas : black 14 anas. Aromatic : dysentery : appetizing.

CHAPTER VI.—AGRICULTURE.

SECTION 1.—GENERAL CONDITION.

In the ill-contrived, and worse administered revenue system of Oud'h, and in the generally prevailing insecurity of life and property, may be found abundant reasons for the present miserably depressed state of the agriculture of this kingdom. With these causes have conspired a diminution of its annual supply of rain, probably in part dependent on the extensive changes of the seasons and winds, which have been remarked within the last twenty-two years, all over the Indian peninsula and seas, and in part, the steady advance of the influence of the dry west winds, assisted by the unremitting destruction of the north-western forests, and the neglect of any system of artificial planting, sufficiently extensive, to counteract the parching effects produced by the removal of these natural protectors of the soil. The truth of these propositions will appear from the facts, which come within the following agricultural summary, and the subsequent remarks on the political institutions of the country.

SECTION 2.—TENURES.

The sovereign is, agreeably to established Indian rule, the only acknowledged proprietor of the soil; and there are no fixed limits to the land-revenue or rent, which he levies from its occupants, save their inability or unwillingness to pay. There are, it is true, some rent-free tenures granted, in former times, for the support

of religious and charitable institutions, and some bestowed either rent-free, or at a moderate fixed assessment, in consideration of past or perpetual services of different kinds. But there is no security, against the partial, or total resumption of these grants, except for incumbents who are zorwālās, that is, who have interest, at the darbār, sufficient to overawe the chakledar and zamindārs : thus the villages of Sat'hinī and Kishanī, near Pālī, are held by a tribe of Kāyat'hs, the descendants of former servants of the state, at a low assessment, which is never augmented—*except when the chakledār chooses* ; but estates of all dimensions have, for hundreds of years, been kept in the same families, by establishing and maintaining a proper influence at Lak'hnaū.

Formerly, regular leases and counterparts were executed, to run from three to five years ; and their conditions were strictly observed. But since the death of Nawwāb Saādat Alī, in 1814, no lease has been granted for more than one year ; and the rent is fixed at such a rate,—generally fifty per cent. above that of former times,—as to leave the farmer little, beyond a bare subsistence. Hence, he is hardly ever possessed of capital sufficient for providing seed even, but is obliged to borrow the seed from a neighbouring *mahājār*, or banker, to whom he is always in debt.

The consequence is, that the zamīndār speedily falls into arrears, out of which he is not allowed time to extricate himself. For when he happens to have a favorable season, and has paid into the faujdār's hands one-half of the annual instalments, the latter demands instant payment of the remaining half ; in failure of

which payment, the faujdār either takes measures to prevent his cutting the crop, until he has paid the full balance of the year, and twenty-five per cent. more than was fixed in his lease, or he cuts the crop and sells it, with the whole of the cattle, and other property of the zamīndār, who thus becomes *tūt*, “a broken man.”

The chakledār then summons the ex-zamīndār and the kāmūngó, and questions them regarding the assessment, which the farm will really bear. Supposing it to have hitherto paid 1,000 rupees, the zamīndār declares, that he cannot now offer more than 500, in consequence of the confiscation of his cattle and other property, by the *faujdār*. This latter sum the raīyats, or immediate cultivators, and most permanent occupants of the soil, are in general ready to advance, in order to save themselves from expatriation. The chakledār then takes the 500 rupees from the raīyats, pays it into the treasury, and makes over the estate to the zamīndār, in *amānī* tenure, the latter then paying to the Government *all*, that he receives from the raīyats, and receiving in return only a bare subsistence for himself,—perhaps 50 or 60 rupees from an estate, which formerly paid 1,000. Next year, the raīyats are better able to pay the full assessment, and the zamīndār receives back his estate on the old terms, by which he may, in a good year, gain 200, 300 or 500 rupees, but, in a bad (that is a *dry*) year, may again be forced to part with his stock, clothes and other property.

Nor is the possession of an hereditary character ; for combined enterprise and prudence form no safeguard against these vicissitudes. Wherever the chakledār

pitches his tents, the work of plunder and devastation commences with the unroofing of the neighbouring villages, to supply temporary huts for his troops ; the zamīndārs and their immediate adherents, at the same time, flying to the jangals, when they ascertain an intention, on the chakledār's part, to increase their burdens. Nā'in is a large town in the parganā of Salon, containing, among a population of 10,000, no fewer than 5,000 or 6,000 fighting men (*kammar-bānd'hne-wālé*), of whom 3,000 are expressly employed by the *t'hākurs*, or gentry, in collecting the revenue, and fighting with the chakledār, when necessary. Their raīyats held extensive farms, varying from 20 to 100 *big'hās*, and never were heavily assessed by the *t'hākurs*, when the *chakledār* demanded no more than the usual revenue. Among these *t'hākurs* is one named Isrī Sing'h, who had continued punctually to pay an annual revenue of 100,000 rupees, and at the same time managed to acquire a capital, which rendered him independent of the usual aid of a banker. The chakledār, Kunnan Lāl having, in 1837, augmented his demand upon Isrī Sing'h by 10,000 rupees, the latter mustered his forces, and maintained his village against the chakledār, until the approach of Colonel Roberts's newly raised brigade, when the zamīndār fled to the neighbouring jangal, four miles west of Salon. His house was burnt down by the chakledār, who raised a fort on its site. The refugee zamīndars sometimes remain, a year or two, in the jangal abovementioned, and do not thereby suffer from sickness.

The same system extends to the eastern parts of Oud'h. Near Faizābād, the raīyats have, ince Saādāt

Alī's death, been so severely oppressed, both by the Bachgotī *zamīndārs* and by the *chakledārs*, that many of them emigrate, and all earnestly desire to see their country placed under the Company's government. The *zamīndārs*, when hard pressed by the *chakledār*, force their *raiyats* to pay up all arrears of rent, and fly with it to the *jangals*, where they remain from two months, to half a year, or a year.

In the neighbourhood of Pālī, the *zamīndārs* are remarkable for greater forbearance towards their *raiyats*, whom, in case of misfortune or mismanagement, they never dispossess entirely. The *raiyats* pay their rents, when they can ; and when they cannot, the *zamīndār* attaches their property, and gives them a smaller holding, such as four *big'hās*, for their subsistence. Still, the same desire, to be placed under British rule, prevails here, as at Faizābād.

It may here be remarked, that Brahmins are not in the habit of cultivating the soil, with their own hands :—they would thereby lose caste. Thus in the village of Agaī, fourteen miles up the Gūmtī from Sultānpūr, all the *zamīndārs* are Brahmins ; and they employ *ahīrs* and *kurmīs*, in the labours of the field ; giving them no lands, but paying them in kind, for their work,—two *mans* of wheat, in Chait (March—April), two of paddy, in Ko'ār (August—September), and, daily, five *ser*s of barley, gram or *marū'ā*, whichever of these may be most abundant. This is the common practice, in all the Brahmin villages of Sultānpūr.

SECTION 3.—EXTENT OF FARMS.

Sheo Dat Sing'h, the zamīndār of Pāli, farms forty-two villages, which have been under the management of his family, for seven generations, although his mode of levying the revenue is according to the usual fashion,—many lives being occasionally lost in the process,—and although his progenitors either fled, or fought almost every year, before paying the dues of the nawwāb. He was in the jangal, during the years 1824-5, and 1825-6. In 1836, also, his country was invaded by Darshan Singh, the chakledār of Rudaulī, who exceeded his jurisdiction, in attempting to levy revenue beyond his own chaklā, and who, moreover, was in the habit of exacting more, than was due. The zamīndār forbade his followers from firing a single shot, and went off with 800 of them to the south, and remained six weeks in the jangal; after which, he solicited, and obtained leave to pay his revenue directly into the Lak'hnau treasury.

In Bainswārā, the largest zamindārī is Daundiāk'hērā, held by Rāmbakhsh Sing'h, and in part sub-let, by him, to his relations. It is in extent, thirty miles from east to west, and twenty miles from north to south, and pays an annual revenue of 300,000 rupees. In ordinary years, the amount of nānkār, or allowance for management, is 45,000 rupees, of which 25,000 rupees are Rāmbakhsh Sing'h's own share, the remainder being divided among the other zamīndārs: but in favourable years, he obtains an additional profit, amounting to 100,000 or 150,000 rupees. He maintains between 800 and 900 followers, and lives

with his sister, the bahinī sāhib, in the fort of Daundiāk'hērā; the females of his own family residing in the town, which is two miles in length, and half a mile in breadth, lying along the Ganges, which, for the last ten years, has flowed close to it. Many of the inhabitants are zamīndārs, one or two members of whose families reside on their farms, the remainder entering the Company's or other public services. The smallest zamīndārīs give a revenue of only 100 rupees, and afford but a mere subsistence. The rent paid, by the raīyats, varies from eight anas to two, three and four rupees per big'hā.

The largest zamīndārī to the north of Sultānpūr is that of Sat'hinī, and Mohonā, held by Alībakhsh, a Bhalé-sultan, who pays 100,000 rupees of revenue. All the other holdings, in its vicinity, are small, and are in the course of gradual absorption by Darshan Sing'h and Harpāl Sing'h, who force the proprietors to execute deeds of sale in their favour.

SECTION 4.—RENT.

Since the death of Saādat Alī, the permanent prosperity of the country has been sacrificed to the exigencies of the year, to the supineness and extravagance of the ruling power, and to the rapacity of the temporary local authority. During that sovereign's life, the rent of good land varied from one, to one and a half rupee per big'hā: now, the assessment is two, three or four rupees per big'hā, and can seldom be fully levied, without ruin, both to raīyat, and zamīndār.

SECTION 5.—TILLAGE.

When a field has, within four months, had thirty-two double ploughings, that is lengthwise (k'harā-k'harā), and across (bēndā-bēndā), it is considered as thoroughly fitted for a wheat crop : but in general, only twenty or twenty-two double ploughings are allowed : the last double ploughing is made diagonally. After the last seven or eight ploughings, which take place in September, the soil is finely pulverized with a short, thick and heavy plank, called a *serāwan*, on which the driver of a pair of bullocks stands or sits, supporting himself by an upright stick, which is fixed into the plank. Each time that the *serāwan* is used, it is drawn, eight times, over every spot of the field,—four times lengthwise, and four times crosswise.

For rice-crops, *maru'ā*, *kodū*, and *ūrd*, when the water is a foot deep on the ground, three or four double ploughings are given, and the *serāwan* is once passed through the soil, so as to reduce it to the state of soft mud, upon which the grain is then thrown.

For gram and barley, the ground has five or six double ploughings ; after the last two or three of which, come as many intermediate, octuple smoothings, with the *serāwan*.

For cotton, the ground has three ploughings, and two smoothings, as usual. The seed is then sown, and the ground is doubly ploughed once, to half the usual depth.

Wheat, and barley are drill-sown (siun bo'ā), the furrows in the last ploughing being, for that purpose, made only two inches apart, from centre to centre. In high lands, gram also is occasionally drill-sown, to secure its being well covered. All other grain is sown broad-cast (ch'hītā-boā).

No Fallows are allowed, except the short intervals, which will hereafter be noticed, under the head of Rotations.

Very little land requires Draining; and when necessary, it is effected by an open ditch. Fences are made of sènhur, and kèrā, and are used for gardens, and orchards only.

SECTION 6.—PRODUCE.

The subjoined table shews, in the first column, the names of the different kinds of grain cultivated, in Oud'h; in the second column, the seed season; in the third column, the harvest season; in the fourth the quantity of seed (in sers) used for each big'hā; in the fifth the produce, in a favourable year, from one big'hā; in the sixth the produce in a bad year; and in the seventh the produce obtained, before the great change in the climate, and other influences, which have so unfavourably affected the agriculture of this country.

Kharif Crops, sown in the Rainy Season.

Name of Crop.	When Sown.	When Reaped.	Seers of Seed per Big'hā.	Māns of produce, in a good year	Māns of produce, in a bad year.	Former produce in māns.
<i>Kodū.</i> <i>Paspalum frumentaceum</i> ,	Beginning of June,	Middle of November,	4	10 or 12	4 or 5	16 or 17
<i>Narū'ā, Meru'ān</i> or <i>Mahrā.</i> <i>Cynosurus corocanus</i> ,	End of June, and } beginning of July, }	Middle of September, } ber, }	4	8 or 9	2 or 3	10 or 11
<i>Sānwa.</i> <i>Panicum frumentaceum</i> , ...	Middle of June, ...	End of August } or beginning of } September, ... }	3	8	2 or 3	10 or 12
<i>Cotton.</i> <i>Gossypium herbaceum</i> ,	End of June, } and beginning of } July, }	End of October } and beginning } of November, ... }	6	4	$\frac{1}{8}$ to 1	
<i>Makal</i> or <i>Bhuttā.</i> Tea mays,	End of June, or } beginning of July, }	End of Sept. or } beginning of Oct. }	50	16 or 18	5 or 6	
<i>Jūndī</i> or <i>Jo'ār.</i> <i>Holcus sorgum</i> ,	Ditto,	End of November, }	6	10 or 12	4 or 5	
<i>Bājra.</i> <i>Holcus spicatus</i> ,	Ditto,	End of Nov. be- } ginning of Dec. }	6	10 or 12	4 or 5	
<i>Urd'h</i> or <i>Mās.</i> <i>Phuscolus maximus</i> } (or <i>radiatus.</i>)	End of July or be- } ginning of Au- } gust, }	End of October be- } ginning of Nov. }	$7\frac{1}{2}$	8 or 10	3 or 4	
<i>Mot'hi,</i> ..	Ditto,	Ditto,	4	5 or 6	3	
<i>Arhari.</i> <i>Cytisus cajan.</i> (Mixed with } the <i>kodū.</i>)	End of June,	End of March,	$1\frac{1}{4}$	8	2 or 3	
<i>Til.</i> <i>Sesamum orientale</i> ,	End of August, } or beginning } of September, }	Beginning of De- } cember, }	3	7 of seed or } $1\frac{3}{4}$ of oil, }	2 or 3	
<i>Asahan Kharif.</i> <i>Oryza sativa</i> un- } transplanted rice,	Middle of June, ...	Middle to end of } September, ... }	30	15	8 or 9	20
<i>Jarhan.</i> <i>Oryza sativa.</i> Transplanted } rice,	Sown, middle of } June. Trans- } planted, begin- } ning of August, }	Middle of November,	40 trans- } planted } into 6 bi- } ghās, ... }	100 from } the 6 bi- } ghās, ... }	50 or 60 } from the } 6 bighās. }	

Rabbi Crops, sown in the Cold Season.

Name of Crop.	When Sown.	When Reaped.	Seers of Seed per Big'hā.	Māns of produce, in a good year	Māns of produce, in a bad year.	Former produce in māns.
<i>Chanā.</i> Cicer arietinum,	{ Beginning of } { October,	Middle of March,...	30	14 or 15	5 to 8	18 to 20
<i>Genhun.</i> Triticum hybernum,	{ Beginning of } { November,	End of April,	50	14 or 15	7 or 8	20 to 25
<i>Jau.</i> Hordeum hexostichon,	Ditto,	End of March,	40	20 to 22	10 to 13	20 to 25
<i>Surson.</i> Sinapis dihotoma,	{ With gram, } { wheat or barley, }	End of February,...	$\frac{1}{4}$	1 to 2	$\frac{1}{2}$ to $\frac{3}{4}$	
<i>Tisī</i> or <i>Arsī.</i> Linum usitatissimum, } Linseed. Sown in poor soil, or on } the edges of other crops, to keep } off cattle,	Beginning of Oc- } tober,	End of March,	10	3 or 4	1 $\frac{1}{2}$ to 2	
<i>Gauhā</i> or <i>Barrā.</i> An oily plant } sown on the edges of fields,	Beginning of No- } vember,	End of April,	$\frac{1}{2}$ or 1	$\frac{3}{4}$ to 1	None	
<i>Kusum.</i> Safflower, curthamus tinc- } torius,	{ End of Septem- } { ber or begin- } { ning of October, }	End of March,	2 $\frac{1}{2}$	{ 1 $\frac{1}{2}$ to 5 of } { flowers, }	$\frac{3}{4}$ to 1 of } { flowers. }	
<i>Masūr.</i> Ervum hirsutum,	Ditto,	{ End of Febru- } { ary, beginning } { of March,	30	8 to 10	4 to 5	

Oats (jai) are not cultivated in Oud'h. In some parts of the country, the produce of wheat is much greater, than what is above stated. Thus, in Daryābād-Rudaulī, the produce is 25 *mans* per *big'hā*. In the better days of Bundélkhand, wheat was produced without irrigation at the rate of 15 or 16 *mans* per *big'hā*, and of such superior quality, that some was imported into Oud'h. In wet soils, like that of the Tara'i, wheat does not thrive: it turns yellow and rots. Hoar-frost is extremely prejudicial to both wheat, and barley.

The cultivation of the poppy might be immensely extended* and improved, with great benefit to the subjects, and state of Oud'h. At present, the chief markets for opium are the agencies established, round the frontier, by the Government of India, who monopolize its produce, and sale, within their own provinces: and, as the modes of cultivation and manufacture are left entirely to the unenlightened discretion of the common gardeners (ko'eris) of Oud'h, the opium produced is, in general, of very inferior quality,—thin, dark-coloured, fermented, and not unfrequently adulterated. The writer of this memoir having, while employed in the Opium Agency at Ghāzīpūr, possessed unusual opportunities of becoming acquainted with all the varieties of the drug, and with the management required for securing,

* Much has of late been said, about the immorality of the trade in opium, to which a short and satisfactory answer can be given. Were the British Government to interdict its cultivation within their own Indian provinces, opium would still be poured into China, though at first, at a higher price, not only from Turkey, and the tributary and independent states of India, but from other neighbouring countries, particularly the Philippine Islands. China, therefore, would not gain by the abolition of the British Indian Opium trade: and to make good the deficit of revenue, which that measure would entail, it would be necessary to impose new and intolerable taxes upon the people of British India, or to curtail its means of resisting foreign aggression, maintaining internal tranquillity, administering justice, and diffusing knowledge,—all for the sake of an unattainable purpose.

in the highest degree, its retention of its native qualities, was, in 1836, empowered, under the authority of Government, to collect opium at Sultānpūr, and to supervise its collection at Lak'hnaū and Sītāpūr, through the agency of the medical officers there stationed; and no doubt could reasonably be entertained of the ultimate success of the scheme. But an unfortunate delay, in procuring the formal sanction of the military authorities, prevented the execution of the design in that year; and the subsequent change of military arrangements occasioned its final abandonment. The time is not far distant, when the growth of opium will constitute one of the principal sources of the revenues of Oud'h. In the neighbourhood of Faizābād, where the soil is particularly favorable, and kāchīs numerous, the growth of the poppy furnishes employment to a large population of that caste, and is yearly increasing, the whole of the produce being taken off, by the native agents of the British Government, at from three, to five rupees per ser, according to its quality, and spissitude. From time immemorial, the cultivation has been carried on, along the left bank of the Gumtī also, where it is sold at from three to four rupees per ser, weighing 64 of the *pakkā* pice current at Sultānpūr. On the right bank of the Gumtī, there is little poppy grown, the population being chiefly Bachgotīs, with few ko'erīs: only a big'hā or two are cultivated at each village, and the produce is partly consumed on the spot, but chiefly, carried to Lak'hnaū, Faizābād, and Benares by paikwārīs, who employ bullocks for its transport, in April, and May, and boats in June, and July. Some of them obtain protection, by passes, from the Oud'h Government: those, who do not, are liable to be plundered by the zamīndārs on the banks of the Gumtī. No poppy is grown, in Bains-

wārā, the soil being too "hot," and the kāchīs, (otherwise called murao and murai, from the name of their caste) being few in number.

It is a remarkable circumstance, that, although the sugar-cane is grown in small patches here and there, particularly between the Saī and Ganges, and although the manufactures of sugar and indigo are carried to great perfection, in the neighbouring district of Jaunpūr, neither of these articles is made, in the south-west part of Oud'h: some sugar is made at Rāmpūr, near Madanpūr, and some other places, in the eastern parts of Oud'h, towards Faizābād.

Cotton is produced throughout the country, and abundantly on the high land along the banks of the Saī, a mile from the river, and chiefly on its right bank; the ground on the left bank being lower, (*k'hāl*) and interspersed with j'hīls, of which there is one near every large town. No cotton is exported to Allāhābād, or Mīrzāpūr: all, that is produced, is worked up in the country, particularly at Tāndā, except a little that is sent to Mau, in the Ghāzīpūr district. Cleaned cotton is sold in Salon, at 10 or 12 rupees per *man*: in Bundélk'hand, it is one rupee cheaper, because more abundant, and raised without artificial irrigation; but it is also of superior quality, the staple being longer, and more silky: the difference is, by the natives, ascribed to the greater softness of the soil, in Bundélk'hand. An immense quantity of cotton is conveyed on men's heads, from the westward, through the cantonment of Sultānpūr. Of this, three quarters come from Bundélk'hand (Kalpī, Bāndā, Konch, Jālwan and Lak'hunā), and the Do'āb, (by water from Najafgar'h). The persons, who

are seen in files, carrying it, are chamārs, hired at one ānā per day : the cotton is also carried on hackeries, one of which holds four large bags (muluā). Now and then, a solitary d'huniyā is seen carrying home, for his own use, a *pakkā man* of it, which he has purchased at Pādshāhganj, for two or three rupees.

Cotton is cultivated throughout Bainswārā, particularly in its western parts, and is there sold, in its cleaned state, at 11, 12 or 13 rupees per *man*, according to the season. The quality is nearly the same, as that of the Bundélk'hand cotton, but it is not so long in the staple, nor so soft. It is cleaned by a portable wheel (chark'hī) ; and the seed is sold at 4 *mans* per rupee.

SECTION 7.—IMPLEMENTS.

Agricultural implements are here, as in other parts of India, rude and simple in the extreme. They are, 1st (Har), a plough, price two ānas : 2dly (P'har), an iron ploughshare, weighing a *kachā paséri*, price eight ānas : 3dly (Kudār), a narrow hoe or pick-axe, price eight ānas : 4thly (P'haruā) a broad hoe, price one rupee : 5thly (Serāwan), a short thick heavy plank for smoothing the ground, price two ānas : 6thly (Machī), a yoke for the serāwan and plough, 2 ānas : 7thly (Pūr, or Garrā) a leathern bag, for raising water ; a large one holding six g'harāsful, 1½ rupee, and one to hold four g'harāsful, one rupee ;—the g'harā holds twenty sers : 8thly : a rope made of one *man* of *sahan*, 12 ānas ; being 25 or 30 cubits long, according to the well's depth : 9thly : (Doglā), a basket made of split bamboos, for raising water from a tank, price two pice. It is worked by two men, while three are required, for the *pur*.

The natives have not, as in some other parts of the country, any superstitious prejudice, against the introduction of new agricultural implements : the expense is their only objection.

SECTION 8.—MANURE.

Manuring (*pansdālnā*) with horse and cow-dung, and with the sweepings of villages, is supposed to give a triple measure of produce, and is, in the month of June, universally practised throughout Oud'h ; and lands intended for wheat, barley, and rice, have the benefit of manure in November also. This, however, is a department of agriculture, in which the natives of all Hindūstān have much to learn. Mr. James Duncan, when Civil Surgeon at Agra, and Secretary to the College there, endeavoured, and successfully, to shew them the prodigious ratio, in which the fertility of the soil could be augmented, by deep ploughing and plentiful manuring, with a scientific compost : but they attributed the result to magic, and insisted, that the experiment would fail in their hands.

SECTION 9.—ROTATION OF CROPS.

The knowledge of the natives on this subject, also, is very limited. They practise only two rotations, one suited to high, and one to low ground. The rotation for high ground is—

Barley, from the middle of October to the end of March ;

Fallow, from the end of March, to the end of June ;

Kodū, and Arhar, from the end of June, to the end of March ;

Fallow, from the end of March, to the middle of October.

Then again Barley or Wheat.

For low ground, the rotation is—

Rice, from the middle of June, to the end of September ;

Gram, or Tīsī, from the end of September, to the end of March, or Wheat, if the ground be not very low.

Fallow, from the end of March, to the middle of June ; and Rice again.

SECTION 10.—GRASS HUSBANDRY.

The inhabitants of this country trust chiefly to the si'ul, d'hāk, and other jangals, and low marshy lands or water-courses, in the neighbourhood of their villages, for the support of their cattle. Within the last 50, and still more within the last 20 years, these jangals have been greatly reduced, by the demand for fire-wood, and the country generally has been dried up ; from which causes, the horned cattle, both oxen and buffaloes, have greatly diminished in numbers. In the south-west districts, towards Mānikpūr, where the population has increased ten-fold within the last fifty years, people, who would formerly have possessed 100 oxen, and 50 buffaloes, have now only four, or five of both. G'hī, which was formerly sold at 20 sers the rupee, is now sold, at a ser and a half.

SECTION 11.—LIVE STOCK.

Oxen and buffaloes are the only animals employed in agricultural labour; and their numbers have been so much thinned, within the period, and from the causes just mentioned, aided by the universal practice of seizing and carrying them off, when their owners fall into arrears, that, during the season for irrigation, it is no uncommon circumstance to see all the members of a family, male and female, working, instead of cattle, at the well-rope. Excepting along the Sa'ī and near Faizābād, where there is still a good supply of water and fodder, the oxen are the most miserable animals of the kind, probably, to be seen in any part of India,—lean, stunted, and frequently diseased: this degeneration has been more particularly remarked, within the last 25 years; and the natives are aware, that cattle brought from the above-mentioned more favorable localities to the arid districts would undergo a similar degeneration. As in other parts of India, very few male buffaloes are reared, the females being more profitable. A she buffalo or two, or a cow or two, are kept by almost every person of substance, whether villager or townsman. From December to June, where there is no grass for them, they are kept tied up, and fed with chaff, and vegetable refuse of every kind. Binaur, the oily seed of the cotton plant, softened in cold water for two hours, affords at this season a sweet and nutritious article of food for cattle, causing a great quantity of milk, which yields a large proportion of g'hī: one ser of this daily suffices for a bullock or milch cow, and two sers for a milch buffalo.

Bullocks are exported, among other places, to Jaunpūr, and are sold there at from 10 to 20 rupees the pair, which is the common price in Oud'h: many purchasers come from Bundélk'hand.

Large numbers of sheep and goats are bred for the supply of the surrounding provinces, and are sold in Oud'h, at the price of ten ānas for a full grown sheep, in good condition, and six or eight anas for smaller sheep. A milch goat is sold for two rupees, and one out of milk, at seven or eight anas. They are at all seasons allowed to go about, during the day, and are shut up in houses during the night. During the dry season, they are fed with leaves, from the mango, and *d'hāk* trees, and from the *bair*, and other prickly shrubs of the ūsar lands.

SECTION 12.—IRRIGATION.

Water for this purpose is obtained either from rivers, pools of different dimensions, or from wells.

When the river bank is of sufficient height and firmness, the water is raised from it, by a leathern bag and a rope; the latter being passed over, either a rude weighty pulley made of a thick block of wood a foot in diameter, or over a slight, rickety, irregular cylinder of split bamboos. But sometimes, even when the bank is nearly perpendicular, and close to the water, and in all cases where the slope is very gentle, whether from a river or pond, the water is raised by means of a contrivance, in universal use, from Egypt eastwards: it is swayed up in basket-fuls by two men, each of whom

commands the swing of the basket, by a rope held in each hand, and attached to the basket, which is woven of split bamboos. When of a round shape, and capable of holding a *man* of water at a time, the basket is called a *duglā* : when of an oblong form, and holding only half that quantity, it is called a *bērī*. Three big *hās* are thus watered, in a day, by four men, who take the work by turns, and raise the water six feet. The high banks of the rivers, towards the eastern parts of Oud'h, are occasionally seen cut into very neat zigzag channels, like locks in a canal, into which the water is raised by a series of baskets at different heights.

From wells of great depth, the water is raised, either by a rope and large leathern bag, worked by cattle or men ; or, where the quantity of water required is small, by one man having a small leathern or iron bucket at each end of a rope, the bight of which is thrown over a pulley, and one bucket descending while the other is ascending.

From wells of small depth, and from ponds, the water is raised by a lever (*d'hènkī*) made of a small tree ; the fulcrum, which is a piece of stick, supported by rough wooden *Ya*, passing through the lever, near its thicker end, which is weighted, with a lump of clay secured by a rope ; and the thinner end having a rope and bucket attached to it. This contrivance also is universal in the eastern world.

The Persian wheel is not used in Oud'h.

Wells are from 15 to 70 feet deep, according to the elevation of the ground. When of inconsiderable dia-

meter, (three to five feet), their cost rarely exceeds five rupees, or two rupees in cash, when the workmen have a daily allowance of food. Brick wells cost from 50 to 200 rupees. Wells, excepting in the more thriving vicinity of Faizābād, are not dug in such numbers, as in former times: they have become more expensive, in consequence of the necessity of digging to a greater depth, than formerly, for water.

Within the last forty years, hardly any new tanks have been dug. In former times, almost every village had a new tank dug every year or two. A tank, which in former times supplied water for 200 big'hās, now gives only sufficient for five biswās, and is exhausted in October, instead of, as formerly, lasting till December. A tank, though not pakkā, or faced with masonry, will remain serviceable for 50 or 60 years. In Bainswārā, a wealthy mahājan, now and then, digs a kachā tank, "nām ke wāste," or that it may be said "this tank was dug by such a one;" but hardly any one goes to the expense of making a pakkā tank. In the pakkā tanks of former times, water remained all the year round, being used for drinking, bathing and washing clothes only, and no one being permitted to carry away water from it, as long as the sides remained sufficiently entire to deter cattle from venturing down the steps to drink. There is a pakkā tank at B'hadarsā, built by Bakhtāwar Sing'h, at an expense of 100,000 rupees, and two more at Sā'éganj, also a fourth at Darshanganj, five miles south-east of Faizābād,—all recently built, with the ill-gotten wealth of the present possessors of that part of the country.

CHAPTER VII.—HORTICULTURE AND ARBORICULTURE.

The richest soil immediately round the villages is enclosed, and reserved for gardens, in which are raised the following (tarkārī) vegetables :—

Baingan (*Solanum melangena*) ; Sēn or Bākila (*Faba vulgaris*) ; Mirsā (*Amaranthus oleraceus*) ; Taroī (*Luffa acutangula et pentandra*) ; Alū (*Solanum tuberosum*) ; Kaddū (*Cucurbita lagenaria*) ; Parór (*Bignonia suaveolens*) ; K'hīrā (*Cucumis sativus*) ; Kan kalī (*Cucumis utilissimus*) ; Jaukī ; Chaunrāī ; Karailā ; Guihā, &c. : also the fruits undermentioned, some of which grow also apart from the village, in open groves ;—Am (*Mangifera Indica*) ; Nimbūā (*Citrus medica*) ; Katahl (*Artocarpus integrifolia*) ; Jamanī (*Eugenia jambolana*) ; Bāir (*Zizyphus jujuba*) ; Sharīfā (*Annona squamosa*) ;—and the subjoined intoxicating plants, and tree ;—Pōst (*Papaver somniferum*) ; Tambakū (*Nicotiana tabacum*) ; Mahuā (*Bassia latifolia*), from which sharab, or distilled spirit, is prepared ; and Gānj'ha (*Cannabis sativa*), from which are obtained the intoxicating preparations b'hang, and charas.

Tobacco is raised by the kāchīs, in a big'hā or two of the best raised old soil, near each village.

No gānj'ha is raised in Bainswārā, which is creditable to, and accordant with the higher tone of morality, in that primitive district. Its soil is too dry, and irri-

gation too difficult, for the growth of the poppy, and it has few of the maraī tribe among its inhabitants.

Opium, b'hang, gānjhā, charas, and darū, or sharāb are contraband by the Company's regulations, and are confiscated, if they pass the frontier: but the Oud'h police allow them to be carried to the frontier, on payment of duty.

Potatoes are not in general use in Oud'h. In the vicinities of Kān'hpūr, Lak'hnaū and Faizābād, a few kāchīs and kanjars plant them, for their own use, and for exportation to the nearest British cantonments: but in the interior districts, the plant is either unknown, or, where known, its introduction into general use has to contend with the prejudices of the people, and especially of the brahmans and Bachgotīs. Men of all castes, who have been in the Company's military service, eat potatoes, and all other vegetables, except onions and turnips, which are eschewed by brahmans, rājputs, go'ālās, and even by the kāchīs, who raise them. Sipāhīs, when on leave at their homes, although they will eat potatoes, will not plant them: the cultivation, particularly the irrigation and hoeing, is too troublesome for them; and, besides, they consider the occupation somewhat beneath them. In the neighbourhood of Delhī, all castes eat onions and turnips: but all castes will there drink, from a mashk, or leathern bag, which would be contamination to an Oud'h brahman—in Oud'h.

Within the last quarter of a century, there has been a lamentable deficiency in the number and extent of the *groves* planted. A person who, in former times, would have planted 100 big'hās, now satisfies himself with

two : where formerly ten topes would have been planted in a year, now there are only one or two ; and where two big'hās of trees are planted annually, *ten are cut down*. The natives are aware, that want of trees dries up the country, and assign this, as one cause of the ruin of Oud'h. A grove lasts between 100 and 200 years. Formerly, all the groves were of mango trees : within the last 20 years, the mahuā has been more generally introduced, as being more profitable, on account of the portable, and valuable oil, and spirit, which it yields ; and the mango fruit being considered a perishable luxury, which people cannot now afford. A spirit is distilled by the Kalwārs, from the sweet and succulent corolla of the mahuā, and is consumed by the low-caste people of the neighbourhood. The tree has long been common in the south-west of Oud'h, and has thence been disseminated all over the country. A good mahuā tree gives annually oil and spirit, to the value of ten or twelve rupees. The seeds yield one-fourth of their weight of oil, which is used for burning, and, by the poor, as a substitute for *g'hī* : it is very palatable, and is employed, by the mahājans, to adulterate *g'hī* : it has no fixed value, being seldom sold in Oud'h, though exported in small quantities to the Company's provinces.

Bainswārā furnishes an exception to the general decay of arboriculture in Oud'h, many extensive plantations having been made in that district, within the last 20 years, by both Hindūs and Musulmāns. The trees planted are the mahuā chiefly, with smaller proportions of the mango, gūlar (*ficus glomerata*), jāmanī, nīm, katahl, barhar, aonlā, &c. The mahuā, nīm, jāmanī and mango, are the only trees fit for building.

In Salon also, trees are planted pretty much as in former times, and mango trees, in as great number as the mahuā, the annual produce of the latter being, in this district, valued at only two or three rupees, according to its size. The other trees planted are the katahl, barhar, jāman, aonla, tun, (for its dye), and bamboo. A seedling bamboo grows no more than two feet and a half, the first year, and takes ten years to attain its full growth : it always dies after flowering : its seed is not here eaten as a substitute for grain, as is sometimes done towards Faizābād. The bamboo will not grow, in high kankar soils.

In the vicinity of Faizābād also, there has, of late years, been an increase in the number of groves annually planted. The trees are chiefly mangoes, with mahuā, pākar, (ficus venosa), and pīpar (ficus religiosa).

CHAPTER VIII.—MANUFACTURES.

The principal manufactures are salt, soda, saltpetre, gunpowder, arms, cotton cloths, dye-stuffs, blankets, sugar, paper and glass.

The abundance of the three first named minerals, in the soil of Oud'h, has already been noticed, under the head of Soils and Minerals.

Salt is manufactured, either by simple evaporation of the water drawn from saline wells, by lixiviation of saliferous earth, or by lixiviation of earth containing both salt, and saltpetre, and subsequent separation of these two ingredients.

The three principal places for the manufacture of salt are Atéhā, Partābgar'h, and Bihtā : and in all, the process is as follows :—

The salt wells are numerous along the banks of the Saī, although the water of the river itself is not salt. They are all kachā ; and their depth is in proportion to the height of the bank, generally twenty feet. When the luniyās, or salt manufacturers pitch upon a spot, where they think salt-water likely to be found, they obtain the zamīndār's permission to sink a well, by engaging to pay him, annually, 50 rupees for the water, which they draw from it. If they prove successful in their search, many more wells are soon formed round the first one, according to the supply of saline water, the wells being generally seen, in groups of about 100 together. The water is raised in the usual manner, by bullocks, with a leathern bag of buffalo hide, (which holds a *man* of water, and lasts six months,) suspended over a pulley, by a rope of cotton thread, (which lasts a year), and is allowed to run into a shallow reservoir of brick and mortar, (which requires half-yearly repair), about thirty-five feet long, half that breadth, and seven inches in depth. With a west wind, the water wholly evaporates in one night, leaving the salt white, and pure. In an east-wind, two days may be required ; and the salt is then of inferior quality, and used only for sheep : it is sold on the spot, at a rupee

for 3 *mans*, while the superior salt brings a rupee, for 2 *mans*. There is only one reservoir attached to each well, and it is washed with salt-water, after each evaporation, to clear it of dust, &c. Some manufacturers, when the wind changes to the east, immediately let off the water into a *pakkā* reservoir, 13 feet deep, until the wind changes to the west. North or south winds seldom occur, and are considered, when dry, to answer as well, as a west wind. The better kind of salt, when carried as far as Sultānpūr, is sold at a rupee, for one *man*, and is carried off in hackeries by *béopārīs*, chiefly to Naiāganj Chinhaṭ, a mart situated eight miles, east of Lak'hnaū.

From saline earth salt is obtained, by the same process, that is employed for extracting saltpetre.

Small quantities of salt and saltpetre are made, on the left bank of the Gumtī.

Soda is obtained by scraping off the white efflorescence, known by its alkaline taste, which it forms on the surface of the soil; and by subsequent lixiviation, decantation, and evaporation.

The efflorescence formed by saltpetre is distinguished, by its sharp, cooling taste, and is formed on a black soil. It is collected during the whole of the dry season, and at its termination is thrown into a pit, called a *k'hattā*, which is sometimes 25 feet in depth, and from three to four feet, in diameter. The pit is filled to a fifth of its depth, with the saline earth, which is well rammed down; and the pit is then filled to the brim, from a neighbouring well, with water, which is so brackish,

as to turn a brass vessel black, like iron, and to be unfit for drinking: this filling generally occupies three days. On the fourth day, no water is added, and the level of that already contained, in the pit, is found to have sunk twenty inches, from evaporation, it is supposed. When the water is observed, on taking up a little of it, to deposit a considerable quantity of saline matter, which generally happens on the fifth day, the solution is raised out of the k'hattā, with a common well-lever, loaded with clay, and carrying a kūnr or earthen vessel, capable of holding thirty sers of water, and is allowed to run into five shallow beds, called k'hiyārī, formed in the common soil, round the well, and diverging from it, like the sticks of a fan. For a k'hattā of the above mentioned depth, each of the five k'hiyārīs has an area of about one biswā, forming a segment of a circle, and at its circumferential extremity, four or five small apertures fitted with bamboo spouts, through which, after the crystallization of the salt and saltpetre has gone on, for six or seven days, the reddish-coloured mother-water is allowed to run off, which it does in twenty-four hours, into nāds, and is used, in *lixiviating* the next batch of saline earth. The *mixed* saline mass is then found in the k'hiyārīs, from five to ten inches in depth, and of a dirty white colour. It is taken up in baskets, and put into another k'hattā $3\frac{1}{3}$ feet deep, and $6\frac{2}{3}$ feet in diameter, which it completely fills, and is covered with a cloth, over which from ten to twenty *mans* of earth are thrown, and beaten down, until it forms a cylinder, about twenty inches high, and of the same diameter, as the k'hattā. At the end of eight or ten days, on removing the earth and cloth, the dirty water is found to have been thoroughly pressed out of the salt, which appears perfectly white, and fit



for alimentary use. Below the salt, of which there may be 15 or 16 *mans*, are found 2 or 3 *mans* of saltpetre, in crystals an inch long, perfectly distinct, it is said, from the salt, and equally pure and white throughout. The salt never undergoes any subsequent purification; but the saltpetre is subjected to another solution, from which it emerges in crystals, 4 or 5 inches, in length, having been purchased by an *ijāra-dār* resident there, who farms all the saltpetre, produced in Bainswārā, Salon, Partābgarh and Banaud'hā. He stations, in the saltpetre districts, people who purchase the saltpetre from the *nuniyās*, at a fixed price, and has it conveyed in hackeries, at all seasons of the year, to Lak'hnau, where much of it is expended in the manufacture of gunpowder. The salt is sold on the spot, at one rupee for 14 *pasērīs* of the very best, which is thought superior even to the Sāmbhar salt, and at half that price, for the coarser kinds. It is eaten by all classes, except some brahmans, who, from motives of caste, restrict themselves to the Lahaur salt. The saline mud, about five feet in depth, which remains in the large *khattā*, after the *lixivium* has been raised out of the latter, is taken out with hoes and baskets, and thrown into a heap, which by annual addition grows, as high, as a fort, or a fives' court. This is the process followed in Bainswārā.

When the saltpetre is not farmed, as at Agai, near Partābgarh, it is made by the *nuniyās*, and sold at 2 or 3 rupees per *man*, in the shape of *shora*, (impure saltpetre), to the *zamīndārs*, who refine it into pure saltpetre, (*kalam*) and employ it, in the local manufacture of gunpowder solely, none being sent to Lak'hnau. The following is the process of the *nuniyās*. From the

soft black earth, in the immediate vicinity of their villages, they scrape the surface, to the depth of two fingers breadth, and carry it in baskets, (j'hawā) each containing 2 *mans* of it, to a tank (*harī*) of masonry 3½ feet deep and 6¾ feet in diameter, in which 20 or 25 j'hawāsful of the earth are well mixed with 10 gharāsful of water thrown upon it. Twenty-four hours afterwards, the solution is let out, by withdrawing a wooden plug, at the bottom of the *harī*, and runs very slowly into *hāndīs*, through a canal made in the masonry. The solution is red and transparent, and is evaporated to dryness, in the *hāndīs*, (open-mouthed earthen vessels) over a fire of k'har or phūs, (thatching grass), three *hāndīs* being placed, on the fire, at a time. In this state, it is sold to the zamīndārs, who, at their own houses, employ the most skilful of the nuniyās to refine it, by the following process. It is dissolved in a sufficient quantity of water, and filtered through thin coarse cloth, and then boiled for two hours, in a b'hattī or karāh, (an iron evaporator four feet wide, and about two spans deep, which costs ten rupees.) It is then cooled, by taking the karāh off the fire, and placing it on the ground, and the saltpetre thus forms in crystals an inch long, in which state of preparation, it is used medicinally, and in the manufacture of gunpowder. The exhausted earth is removed from the *harī*, and thrown to the distance of three or four paces, where it is allowed to remain three months; and, at the end of that time, has acquired a coat of efflorescence, which, with two inches of the subjacent earth, is then again scraped, off, and manufactured as above. Wherever the saltpetre earth is taken from, the same spot is scraped, only twice, in one dry season. The brick-work is not

injured, by the saltpetre, in less than a year, but at the end of that period, requires renewal, which is effected at the cost of one rupee.

Gunpowder is manufactured every where, and at some villages, of as good quality, as the best that is made at Lak'hnav,—and is sold, at the low price of five pice, for a *ser*. The charcoal employed is light, and is obtained from a common jangal shrub, like arhar, called *rus* (*justicia adhatoda*.) The dry wood is thrown into a pit, five feet deep and near seven feet in diameter, and, being heaped up, about ten inches above the edge of the pit, is covered with two fingers-breadths of dry earth. The wood is then set on fire, and thus partly burnt, and partly distilled for three hours, after which it is allowed four hours to cool. The charcoal is ground once, by two men, in a common flour hand-mill, (*chakkī*) twenty inches in diameter. To five parts of charcoal, taken by guess, are then added one part of sulphur, and one part of nitre; and the whole is once more ground in the *chakkī*, having previously been slightly wetted, to diminish the risk of explosion, which, however, sometimes happens, to the great danger of the operators. It is then, by rubbing with the hand, passed through a sieve, (*ch'hannī*) made of leather, pierced with holes by a needle, allowed to dry for about four hours, and then stored in wide-mouthed earthen vessels (*hāndīs*.) The manufacture is not confined to professional artists, and is every where conducted with equal inattention to precision of proportion, and manipulation, the ingredients never being weighed. Hence it is frequently found, by the fouling of the gun on trial, that either the saltpetre or sulphur is deficient in quantity: and the whole

process of grinding, granulating, and drying has to be repeated.

Matchlocks are made, in all the large towns. At Alīpūr, five miles north of Daundiak'hērā, they are manufactured, and sold at ten or twelve rupees each; carrying a ball, half as heavy again, as the plain thick pakkā pice current in Oud'h, or about 18 to the pound, and kill at 300 yards. The weapons made at Dob'hīyār, and Pit'hlā, two villages about 18 miles N.W. of Sultānpūr, cost 20 rupees. *Blunderbusses* (g'hor-charhī or "made with locks") are also commonly fabricated, and used in Oud'h: they are made of iron only, never of brass. Superior arms of all kinds are imported from other parts of India: but they will come under notice, along with the commerce of Oud'h.

Swords are made in every large town, and are sold, complete, at 2, 3, 4 or 5 rupees, the price varying with the temper of the blade, which is 29 or 30 inches long, considerably curved, and very heavy.

Spear-heads are made everywhere, and are generally attached to bamboo shafts 9 or 10 feet long. Spears made wholly of iron, shaft and all, are called sāng, and are sold for 18 or 20 anas,—or 2 rupees for the very best, such as will not break, on being thrown to a distance.

Bows are not used in pitched engagements, only as a defence by travellers, who prefer horn and bamboo bows, for their lightness. The best steel bows are made at Marsān, near Lak'hnaū, and costing 15 rupees each, are possessed by wealthy people only. Horn bows

come from the Do'āb. *Arrows* are made at the cities, —Rā'e Baréli and Lak'hnau.

Weavers of the coarse *Cotton Cloth* worn, by the poorer classes, are to be found in almost every village. The manufacture of the finer qualities is carried on, chiefly at Tānda, and in the adjoining British district at Mau. Rā'e Baréli, now a decayed city, was formerly noted for its manufacture of ad'hóta, which still exists there, and at Jāyis : the cloth is sold in pieces $15\frac{1}{2}$ to 17 yards in length, and 26 inches broad, at from $2\frac{1}{2}$ to 8 rupees each ; and much of it is exported to Lak'hnau, Kānhpūr and Banāras. Fine cloth for turbands is made at Jāyis, costing 18 rupees each piece, and is chiefly sent to Lak'hnau.

Dyeing is carried on, at all the large towns ; but the best dyers between Kanauj and Gorak'hpūr are established at Shāhzādpūr, on the south frontier, which has long been celebrated for the permanence, and brilliancy of its dyes. Cloth is sent from great distances to be dyed there.

Blankets of coarse texture, and grey or black colour are made by the garériyās, or shepherds, in all parts of the country, and are used by all castes, even by brahmans when at their meals. They are usually $8\frac{1}{3}$ feet long, by nearly 6 feet in breadth, and cost 10 or 12 ānas. When $6\frac{2}{3}$ feet broad, they cost, for a length of $8\frac{1}{3}$ feet, one rupee ; when $11\frac{2}{3}$ feet long, $1\frac{1}{4}$ rupee ; and when $16\frac{2}{3}$ feet long, two rupees.

Sugar is made, chiefly, in the eastern part of Oud'h, by the usual rough, dirty and dilatory process of tedious

expression, in a stone mortar, with a gigantic pestle worked by oxen. It gives ample time for the juice to ferment, before this is boiled into the dark coloured acescent mass, called gur'h, which, by subsequent processes, has its colour and acidity removed, but is still contaminated with lime, and never resembles true sugar, either in its taste or atomic constitution. Some sugar of superior quality is imported from the Company's district of Jaunpūr.

Paper, from the fibres of the corchorus capsularis, which are also the substance, from which gunny-bags, tāṭ, and the coarsest kinds of rope are made, is manufactured at Lak'hnau and Bahraich ; but it is inferior, in every respect, to the article imported from Kalpf, although the material is the same. *Ink* comes from Lak'hnau in small cakes, sold at 2, 3 or 4 pice the ch'hetānk.

Glass bottles, phials and bracelets are made in the western parts of Oud'h, where soda abounds. The bottles and phials are thin and blistered, and are made of a spheroidal shape only. It is remarkable, that no soap should be made in these districts : the consumption of animal food is perhaps not sufficient to supply the quantity of suet required for the manufacture.

Within the last twenty years, the example of Europeans has made the use of *oil-paint*, for preserving wood, stone and plaster-work, more common than formerly. It generally consists of linseed oil made dry, by being boiled, with red ochre brought from Naipāl.

Indigo is not made, on a large scale, in this part of Oud'h ; and what is manufactured on the British frontier, and is commercially known by the name of Oud'h indigo, is generally of inferior quality. At Sat'hinī, five miles N.W. from Daundiak'hērā, a factory was carried on for 15 years by an European, who ultimately got into pecuniary difficulties, and abandoned it.



CHAPTER IX.—COMMERCE.

SECTION 1.—WEIGHTS AND MEASURES.

Weights. The Mād'hūshāhī pice is the unit of weight throughout Oud'h, and should weigh 270 grains, but is frequently 20 grains lighter than this, and is liable to a discount (battā), when much deficient in weight. It is a thick smooth coin without any device, and is supposed to be made at Lak'hnau exclusively. The *mān* is, as usual, divided into 8 pasérīs, the pasérī into 5 sérs, and the sér into 16 ch'hetānks : and there are two weights, the pakkā and the kachā ; the sér of the former weighing 64 of the standard pice ; but that of the latter varying, in different parts of the country, from 19 to 40 pice in weight, though generally reckoned as 5 to 2 of the pakkā weight, and admitted to be useless, except as a means of cheating foreigners, such as Europeans, and the Musalmān sepāhīs of the king.

Between Salon and Mānikpūr, the only weight used has its sér, 56 pice in weight.

There is a similar want of uniformity in *Measures*. Thus the unit of linear measure, the hāt'h, or cubit, varies from $19\frac{1}{2}$ to 20 inches. It is divided into 6 muthīs, or hand-breadths, and into 24 anguls, or finger-breadths; and two hāt'hs form one gaz, which is divided into 9 girihs. In applying this unit to land measurement, 5 hāt'hs are generally equal to 1 kassī, or lat'hā, or staff, and twenty lat'hās equal to one dūrī, or rope. But in the neighbourhood of Pālī, where one pakkā bighā is equal to $2\frac{1}{2}$ kachā big'hās, the kachā biswā is 10 kassīs by 5, thus making the kachā big'hā 60,000 square inches. In Bainswārā, again, the kassī is only $3\frac{1}{4}$ hāt'hs, equal to 65 inches, (or two paces, equal to 66 inches), and the kachā big'hā is 20 kassīs square, or only 26,000 square inches, taking the kassī at 65 inches. Between Salon and Manikpūr, the kachā biswā is 9×5 lat'hās, which makes the big'hā 45,000 square inches.

SECTION 2.—CURRENCY.

The currency table is as follows :—

26 kaurī = 1 damrī (imaginary);

1 damrī = 3 dam (imaginary);

20 damrī = 1 āna (imaginary);

16 āna = 1 rupee;

25 dām = 1 pice; but the number of kaurīs in a damrī, and of pice in a rupee vary.

Gold coin is seldom seen, and is chiefly used for facility of carriage, and for burying in the ground.

Much coin is thus concealed, in metal vessels, either copper, brass or phūl (a white metal), and buried in the floor of the house, 2,000 or 3,000 coins in each vessel. This is always done, with the knowledge of the head of the family, of his wife, and of his eldest son ; so that the money may not be lost, in the case of the sudden death of one of the parties.

The silver coins current, in the south of Oud'h, are the Lak'hnau rupee, coined at that city, and the Company's and Farrukhābād rupees coined at Calcutta. The former, though containing a fraction of a grain more silver than the latter, and only half as much alloy, generally bears a discount of $1\frac{1}{4}$ or $1\frac{1}{2}$ per cent. at Sultānpūr. It is nevertheless generally considered to be $\frac{1}{3}$ of a pice better, than the new Company's rupee, and— $\frac{1}{2}$ pice worse, than the Farrukhābād rupee still current. The Shershāhī rupee, coined at Faizābād, is considered 1 pice inferior to the Company's rupee. The copper coins are the plain thick Mād'hushāhī pice, of 270 grains, when new, and of which 32, 33 or 34 go to the Company's rupee, and the Farrukhābād pice of 100 grains, of which from 64 to 88 go to the rupee : but the latter coin, though issued to the British troops stationed at Sultānpūr, was not current there. A few silver 2, 4 and 8 āna pieces are struck at Lak'hnau ; but their circulation does not extend beyond the capital.

Battā is taken on all rupees, when light, and on all rupees of former reigns, even when of full weight : thus Ghāzī-ud-dīn Haidar's rupees of full weight bear a discount of 7 damrīs, and those of Saādat Alī a discount

SECTION 3.—INTERNAL TRADE.

ROADS AND BRIDGES. Except a few yards near the houses of wealthy zamīndārs, and the military road which connects Lak'hnaū with Kanhpūr, there are no made roads in Oud'h. Across the Sai, there is not a single bridge, pakkā or kachā, except the ancient pakkā one at Mohān, on the road just mentioned. A pakkā bridge, of five arches, now rebuilding across the Tons at Sāhganj, for the convenience of the powerful zamīndār, who possesses that fort, and another long low bridge, or perforated causeway, south of Tānda, are the only other bridges, which I have seen or heard of, in the south part of Oud'h. The difficulties opposed to the internal traffic now existing, in a country, like Oud'h, intersected by rivers, torrents and ravines, without roads, bridges or police, only prove, how important that traffic might become, under a better system of government. From one turbulent part of the country, that which lies between the Gūmtī and the eastern frontier, the peaceful arts seem to have long been banished,—all except the indispensable occupations of the agriculturist and weaver; and the plough there out-numbers the loom, in the proportion of a hundred to one.

CAPITAL. There are several families of Mahājans belonging to Rā'ē Barélī said to possess capitals, equal to from one to four laks of rupees, and who formerly resided at that city: but since the death of Saādat Alī, they have been compelled to take refuge at Lak'hnaū, Farrukhābād, Kanhpūr and Banāras by the exactions of the chakledārs, and by downright robbery

dārs ; the chaklédār, because the mahājan had previously been in the habit of supplying the pecuniary wants of a prosperous zamīndār, insisting that the mahājan should still continue to make the same advances, and take, as security for repayment, the receipt of the zamīndār, who was a ruined man, and, at that moment, a prisoner in the chaklédār's camp. There are now, at Rā'e Barclī, only three or four mahājans (brahmans), who possess so large a capital as 10 or 20,000 rupees.

At Terha, near Bigahpūr, in Bainswārā, there is a mahājan named Gulāb Dūbé, who acts as a banker, and deals in cotton and cloth, and possesses a capital of two laks. At Bigahpūr, 8 miles E. b. S. from Kānhpūr, resides Maikū Lāl Tirbédī, who deals in the same articles, and has a capital of one or one and a half lak ; and there are others, to the number of 100 or 200, distributed throughout Bainswārā, possessed of large capitals, and dealing in money, cotton, cloth and grain, who, in six months, make a profit of 50 per cent. by making advances of seed to the surrounding zamīndārs, the latter class being always in their debt, and compelled to take the seed on those terms. The mahājan's charge to them, on cash accounts is 24 per cent., while dealers in grain and cloth (tangible articles) and other trust-worthy persons, obtain loans at 8 and 10 per cent. These mahājans secure an interest at court, by the annual payment of 100 or 200 rupees to a munshī, or other person among the amlā, at Lak'hnau ; and the chaklédār is thus deterred from plundering them.

At Médnīganj reside some of the wealthiest and

The amount of their capital is unknown ; but that possessed, by 20 or 25 of them, is supposed to be very great, and there are many others possessed of inferior means. They carry on their trade economically, by the aid of gomāshtas, with salaries varying from 25 to 40 rupees, stationed at Calcutta, Mīrzāpūr, and the intermediate cities, and of charhandārs at 4 rupees a month, who are placed in charge of their boats, on the Ganges. They do not now use the water-carriage of the Saī, on account of the exactions practised by the zamīndārs on its banks, but have every thing imported on hackeries, which return empty, there being no exports capable of bearing that expensive mode of conveyance :—grain has never been exported from Oud'h, the population having always been adequate to its local consumption. The imports are spices, silks, Maksūdābād rice, and other luxuries, for which purchasers are found in the surrounding country. Kimkhwābs also are imported from Banāras, and sent to Lak'hnaū, not direct, but by the safer, though circuitous route of Allāhābād and Kānhpūr. Inland from Mednīganj,—in Salon, &c,—there are no hackeries, and no traffic carried farther than eight miles : every thing is conveyed on bullocks and buffaloes. In Bainswārā and Sultānpūr, hackeries are more common.

The Bains tribe, who give name to the district of Bainswārā, pride themselves on being the most sagacious, the most enterprising, the wealthiest, the best housed, and best dressed people of Oud'h. They are not like the other Rajpūts, who can only become cultivators or soldiers, being precluded by the rules of their

so easily acquired by them in trade, had ever, until within the last 50 or 60 years, prevented their entering any foreign service. Prejudices of caste, also, opposed their inclinations for a military life : the first individuals of the tribe, who entered the army, were excluded from caste, on the supposition that while subjected to the will of others, they might have done something to forfeit its privileges ; and even to the present day, no Bains who has been at sea is allowed to retain his caste. But they have, (probably through the increase of their population), overcome their scruples to military service ; and much wealth accrues to Bainswāra from the numbers of them, who are engaged in the Company's, the Go'āliyār, Nāgpūr, Haidarābād, Alwar, and Lahaur armies. The commercial Bainses have banking establishments, and cloth depôts at Calcutta, Kamilhā (Tiprā), D'hākā, Chatgānw, Māldā, Dinājpūr, Maksūdābād, &c., westward, as far as Jaipūr, and visit their native district, once in every five years, leaving an experienced relative in charge. Their traffic includes elephants from Tiprā, shawls from Kashmīr, and every commodity vended within these limits. In the prosperous country towards Faizābād, although there is no trade, properly so called, there is in every village a mahājan, who employs his capital in making advances to the zamīndārs, and always receives it back at the end of the year,—unless his constituents be dishonest people,—with from 24 to 50 per cent. of interest : the same practice still exists, in most of the provinces ceded to the Company, 37 and 63 years ago.

EMPORIA. Besides the daily sales, which take place within the limits of every city, town, and large village,

place to place with bullocks and buffaloes laden chiefly with grain, salt and sweetmeats (bhélī); there are established fairs, which, under the name of Mēlā, Hāt, and Ganj, periodically collect great numbers of traders from different parts of Oud'h, and even from other countries.

Thus at Dālāmau, there is a Tīrat'h ("holy fair") on 4th of Phāgun, (about the 24th of February), and another at the full moon of Kārtik, where about 300,000 people assemble, and which are indeed the chief sources of the prosperity of the place, as it yields no exportable produce, but contains many artisans induced to settle there, by the semiennial vent, which they find for their wares. The Tīrat'hs are now as well attended as ever, and by visitors from the distances of Naipāl, Gorak'hpūr, and Bundélk'hand. Several of the bankers and cloth-merchants possess capitals of between 10,000 and 20,000 rupees: the cloth is brought principally from Mau, in the Ghāzīpūr district, and from Britain, viâ Calcutta and Banāras.

A mēlā is held at Surajpūr, two miles north from Daundiāk'hērā, on the bank of the Ganges, where 200,000 people usually assemble at the full moon of Kārtik, (between the middle of October, and middle of November). There is a small pakkā g'hāt, where the people bathe, and also carry on a traffic in cloth of different kinds, coral (mūngā) imported by goshaens, viâ Ch'hattarpūr in Bundélk'hand, and pearls brought viâ Calcutta, and also from Ch'hattarpūr, where there are very wealthy dealers in these articles. The goshaens,

horseback : those, who bring cloth, come in boats. They all arrive a month before the fair, and remain a month after its conclusion, to adjust their accounts. They travel in bodies of 250 or 300, well armed, and do not enter the Oud'h territory, until they cross the Ganges at Sūrajpūr. Their customers come principally from Lak'hnaū. The trade has existed for many years, and has never been interrupted by depredators. The faujdār of Dālamau stations a kotwāl, with two or three *tomans* (each 100 strong), with a six-pounder, to protect the traffic. The value of the pearls sold here sometimes amounts to 1,000 rupees a pair : seed pearls are sold at from 1 to 3 rupees for 20. The best large and bright red coral is sold at 4 rupees a tolā (180 grains), and inferior qualities at 2 rupees : no white coral is sold here. Black coral (*udrāj*), brought from Calcutta, is sold at from 1 or 2 to 6 rupees for the necklace of it, containing 108 beads. The amount of property, disposed of at this *mélā*, may be from 100,000 to 150,000 rupees, the corals and pearls constituting nearly the whole of it : the Lak'hnaū merchants also import these commodities direct from Calcutta, via Kānhpūr.

At Kolhuāgar, three miles south of Harhā, is held the only other *tīrat'h* in Bainswārā. About 100,000 people assemble there at the full moon of Kartik ; but only toys and sweetmeats are sold. There are some *mélās* held at the shrines of Débī, for instance at Pach'hī'ānw kī Débī, 6 miles west of Unā'e (or Unnāw), which is attended by about 50,000 people, for 9 days, about the middle of Chait, (end of March). Traders come to it, from Lak'hnaū, with small articles, such as

looking-glasses, sold so low as two pice each, For two ānas, a mirror set in a wooden frame, and as large as an octavo volume, may be purchased.

At Mānikpūr, for three days in Māg'h amāwas, (middle of January to middle of February), there is a mélā attended by about 50,000 people, and another at the full moon of Kārtik, which collects nearly double that number. The religious observances are, as usual, bathing in the Ganges, and making offerings to brahmanas ; and the articles of traffic are chiefly cloth, grain, toys and sweetmeats.

At Mahādeo, four miles south of Atéhā, a mélā is held on the 13th of P'hāgun, (about the 23rd of February), which lasts for one day, and is attended by about 50,000 persons. The articles sold are brass and copper vessels, swords, matchlocks, cloth, grain, and sweetmeats.

At Parsadīpār, there is a Musalmān mélā held on the 1st and 2d of Baisak'h, (about the 12th and 13th of April), which has generally about 100,000 visitors, among whom is the *miyān* of Salon, (see Chap. XI.) This assemblage, however, has a more purely religious character, than the mélās before mentioned ; nothing but sweetmeats and other eatables being sold. At its conclusion, the visitors form into parties of 10 or 20, each of which is provided with a flag, and make a sort of pilgrimage to the city of Bahraich, whence they disperse to their homes.

At Garhā, three miles east of Pāparg'hāt, there is a

about 50,000 hindūs, some of whom come, as far, as from Tāndā, Azīngar'h, Jaunpūr, &c. It lasts from 2 to 4 days, and the articles of traffic are brass vessels, grain, cloth and sweetmeats.

Hāts, or fairs, unconnected with religious observances, are held every fourth day, in all large towns, and other central places. Thus at Kareihīyā-bāzār, a village one mile north of Newardīpūr, and containing only 20 families of permanent residents, there is, every fourth day, at all seasons, a hāt attended by about 100,000 persons. It is the greatest hāt in Salōn. From 500 to 700 bullocks are generally for sale there, at prices varying from 5 to 30 rupees a pair, which is the highest price paid for the gigantic white Harī'ānā bullocks. These are brought direct to the fair, by *be'opārīs*, and if not sold there, are taken to the neighbouring towns and villages for sale: the return is in specie. The other dealers are money-changers, grain and cloth-merchants, and druggists. Unwrought iron from Bundélk'hand, a little copper, and great quantities of brass vessels, are sold there; the last named articles being brought from B'hawānīganj, a village of braziers, six miles south of Kareihīyā-bāzār. The hāt is held under a mango grove, and about 200 ch'happars, (roofs supported by stakes), without walls, which, during the absence of the traders, are taken care of by the zamīndārs and kotwālī establishment of the village. It appears to be managed by a chaud'harī, who resides on the spot, and pays 8,000 rupees a year to the zamīndārs. Very good order seems to be preserved at mélās and hāts, no notorious instance of open robbery having of late occurred at

A *Bāzār* is a collection of shops open every day. Every town of 2,000 families has about 50 shops, and larger towns a greater proportion.

A *ganj* is a walled enclosure, reserved for merchandise within the limits of a large town or city, which has sometimes its own walls (*shahr-panāh*) besides. Those of the *ganj* are either *kachā* or *pakkā*, and about 16 feet in height ; and their gates are shut every night, at 9 o'clock, and guarded by *chaukidārs*, and by *sipāhīs* of the king's army (*najībs*). The only robbery of a *ganj*, that has occurred for many years, is that which was perpetrated in 1836 at *Runjīt-pūruā*, the place having been attacked by about 600 men, who carried off about 50,000 rupees worth of property, chiefly cash, jewellery, and piece goods.

SECTION 4.—EXPORTS AND IMPORTS.

Exports. The only superfluities of Oud'h are salt, and saltpetre. Grain, as has already been noticed, has never constituted an article of export.

Imports. The best matchlocks come from Lahaur, and are sold, when the barrels are handsomely inlaid with gold, at 200 rupees a pair : those of a plainer description, but of equal quality, cost from 100 to 150 rupees ; and light ones are sold so low as 50 rupees a pair. The Lahaur weapons are so highly esteemed, because they never burst with a reasonable charge, and are believed to carry true, and to *kill* at the marvellous distance of 800 paces. Lead is imported from

The best swords are imported from Gujrāt, Jod'hpūr, Sirohī, and Lahaur. The Gujrāt sword has a straight blade, under 30 inches in length, set in an iron handle, and costs from 50 to 60 rupees. It has a yellowish cast of colour, and a very slight water, while the other swords of foreign manufacture have a bluish colour, and a strongly-marked water (jigar.) Those from Jod'hpūr and Sirohī are 30 inches long, and slightly curved, and cost from 25 to 30 rupees. The Lahaur swords cost from 50 to 500 rupees, are very much curved, about 39 inches in length, and are of two kinds, —ispāt, which come straight after bending, and faulādī, which do not. If it be attempted to give a spring temper to a faulādī blade, the weapon is spoilt: it loses its keenness of edge, which is sometimes such, as to cut through a matchlock barrel.

Shields are brought from Silhat. The best are made from the hide of the rhinoceros, one hide giving four shields; and their prime cost is 25 rupees. Shields of inferior description, made of buffalo hide, but well finished with the Silhat varnish, and ornamented with four copper gilt bosses, cost 4 rupees. They are chiefly brought by sipāhīs, on leave from the lower provinces, and are sold in Oud'h, at double the above prices. The sipāhīs bring no other commodity with them, except a little silk for their families.

Horn bows are imported from K'hajwā, and Mainpūrī, in the Do'āb, and from Tilhar, 12 miles east from Shah-jahānpūr. They are of two forms, the kamt'hā, or simply curved bow, and the kamān, made with a com-

the arrow. These bows cost from 8 anas to 1 or $1\frac{1}{4}$ rupee, according to the size.

The reeds, called kilak, for writing, come from Calcutta. Paper is imported from Kalpī. Soap also is an import.

Iron is imported from Sāgar, and Naipāl; 16 sērs per rupee is the common price for unwrought iron in short thick masses, pointed at the ends, and 3 sērs the rupee for iron well wrought into hoes, plough-shares, &c.

Copper and brass come from the lower ranges of the Himālayas, in Naipāl, and Kamaun, and are sold in the form of vessels at 2 rupees a sēr, never being imported in an unwrought state. Tin is used only for tinning the brass and copper vessels of Musalmāns in the towns, and for women's bangles and anklets.

Horses, much superior to the native breed, are brought from the Panjāb, Kābul, and Bokhārā, at prices varying from 150 to 500, and 2,000 rupees. Tang'hans, or ponies, from the sub-Himālayan hills, bring from 25 to 500 rupees. Native horses (tattu) are sometimes valued so high, as 40 or 50 rupees: the best come from the banks of the Terhī naddī, near Bahraich.

Elephants are brought from Naipāl, Tiprā, and Chatgānw. Lahaur salt is imported by the pasārīs (druggists) for the brahmans, many of whom think, that their caste would be endangered, by the use of Oud'h salt. The same persons also import a great variety of medicinal substances, which have already

CHAPTER X.—GOVERNMENT.

SECTION I.—GENERAL CHARACTER.

The materials for this memoir, which loss of health has hitherto prevented my arranging into the required form, having been collected in 1837, it is probable that the accession of a new sovereign may have introduced many reforms into the civil, as well as the military government, which has, within the present year, by the appointment of British officers to command the local forces, acquired a prospect of efficiency, discipline and permanence formerly unknown. It will therefore be understood, that the facts hereafter detailed, and any observations which they may call for, are, in strictness, exclusively applicable to the state of affairs, which existed during the abovementioned period.

The administrative state of the country, at that time, may be summed up in a few words :—a sovereign, regardless of his kingdom, except in so far as it supplied him with the means of personal indulgence :* a minister incapable, or unwilling, to stay the ruin of the country : local governors,—or, more properly speaking, farmers of the revenue, invested with virtually despotic power,—left, almost unchecked, to gratify their rapacity, and private enmities : a local army, ill paid, and

* The Hindū population of Oud'h are satisfied with the tolerance of the nawwābs, in matters of religion, and individual honour, with the sole exception of the system of purveyance for the ruler's haram, which they firmly believe to be the chief cause of the progressing downfall of the family. Until the present reign, (1838) chaprāsīs in the king's service used to go with palkīs to the

therefore licentious, undisciplined, and habituated to defeat: AN ALMOST ABSOLUTE DENIAL OF JUSTICE IN ALL MATTERS, CIVIL OR CRIMINAL: and an overwhelming British force distributed through the provinces to maintain the faith of an ill-judged treaty, and to preserve —PEACE.

SECTION 2.—REVENUE SYSTEM.

The kingdom of Oud'h is, exclusively of the metropolitan pargana of Lak'hnau, divided into eleven chaklās or districts, viz., Sultānpūr, Aldémau, Partābgarh, Pach'hamrāt, Bainṣwārā, Salon, Ahlādganj, Gondā-Bahraich, Sarkār-Khairābād, Sāndī and Rasūlābād. Six chaklédārs have the financial charge of these eleven districts, the first six, and the three following districts, which constitute the subjects of this memoir, being respectively under the authority of one chaklédār, in whose person are virtually centred all the powers of the state, within the limits of his jurisdiction.

The districts now named are subdivided as follows:—

1. <i>Chaklā Sultānpūr.</i>	Pargana Bérhar
Pargana Sultānpūr	„ Tāndā
„ Jagdīspūr	3. <i>Chaklā Partābgarh.</i>
„ Chāndā	Pargana Partābgarh
„ Isaulī	„ Amét'hī
„ Tappa Asl	„ Dalīpūr Pattī
„ Bilahrī	
2. <i>Chaklā Aldémau.</i>	4. <i>Chaklā Pach'hamrāt.</i>
Pargana Aldémau	Pargana Manglasī
„ Akbarpūr	„ Rāt-Havélī (Faizābād)

5. *Chaklā Bainswārā.*

Pargana	Ranjītpuruā
„	Harhā
„	Atéhā
„	Mauhrānwā
„	Kumrānwā
„	Daundiāk'hērā
„	Hasnganj
„	Majrānw
„	Haidargarh
„	Rāé-Baréli
„	Dālāmau
„	Sarendī
„	Bardar

6. *Chaklā Salon.*

Pargana	Salon Khāss
„	Parsadīpūr
„	Jāyis
„	Atéhā

7. *Chaklā Ahlādganj.*

Pargana	Ahlādganj
„	Bihār
„	Mānikpūr
„	Rāmpūr

8. *Chaklā Gonda-Bahrāich.*

Pargana	Bahrāich
„	Gondā Khāss
„	Muhammadābād
„	Bārī
„	Atraulā

9. *Chaklā Sarkār-Khairābād*

Pargana	Khairābād
„	Nīmkhārmisrik
„	Khīrīlahrpūr
„	Bāngar
„	Muhemdī
„	Bilgirām
„	Fattehpūr-Biswā
„	Sandīlā
„	Malihābād
„	Kākorī
„	Bijnaur
„	Kasmandī
„	Malānwā

10. *Chaklā Sāndī.*

Pargana	Sāndī
„	Pālī
„	Saromannagar
„	Shāhābād

11. *Chaklā Rasūlābād.*

Pargana	Rasūlābād or Miyānganj
„	Safīpūr
„	Asīman
„	Unnām, Unnāw, or Un-
„	Muhān [nae

12. *Pargana Lak'hnau.*

Pargana	Rudaulī Daryābād
„	Goshāenganj
„	Déwé-Jahāngīrābād
„	Kursī
„	Sid'haur,

being, in all, 70 parganas.

The chaklédār's office has, in many cases, become

what in Europe would be called that of farmer of the revenue. He has no salary ; and his official income is merely the difference between the sum, which he has, for the year, engaged to pay into the public treasury, and the amount which, with the military power of the state at his command, he can levy from the zamīndārs, who generally submit to a moderate extortion rather than accept the threatened alternative of a kacha tahsīl of their lands, and consequent exposure of their family affairs.

The chaklédār is in his tents, during eight months of the year ; and his followers, as well as the local military force which accompanies him, shelter themselves, as well as they can, in huts hastily erected, and covered in with roofs forcibly stripped from the houses of the next village. In rainy weather, the chaklédār inhabits a hut of the same kind, but covered with the fly of a tent and surrounded by (kanāts) enclosures of cotton cloth.

To the immediate charge of each pargana are generally allotted one faujdār and one déwān, who are servants of the state, receiving salaries, the former of 25 rupees, and the latter of 15 rupees a month. The faujdār is also authorized to levy, for his own benefit, a rupee from every zamīndār, who has an audience of him or to whose village he takes occasion to pay a visit. This gratuity (salāmī) is called b'hènt, and its amount is entered in the records of the pargana, though carried to the faujdār's credit : if allowed to fall into arrears, it is forcibly realized in the months of Kūnār (Sept.-Oct.), Ag'han (Nov.-Dec.), and Chait (Mar.-

from all strictly military duty, when attached to the pargana revenue department, as he generally is for a year or two at a time. The *dewān* also receives two authorized b'hents annually, one in Kunār, and one in Chait,—a rupee each time, from each zamīndār in the pargana ; over and above which, another rupee is unauthorizedly levied on each occasion, under the name of nazar (present), and $\frac{1}{4}$ or $\frac{1}{2}$ an āna is taken as battā (discount) on every rupee, that passes through his hands.

To each zamīndārī, a kanūngó is attached, whose duty it is to keep a regular account of the revenue, and a fotadār (treasurer) to accompany the zamīndār's kāyat'h, (clerk) while receiving the rents from the raīyats. The zamīndār has a separate allowance of various sums, up to 600 rupees, from the state, to defray the expense of making this collection.

Leases (pattā) are signed by the chaklédār, faujdār, déwān, kanūngó, and zamīndār. The assessment of the year is divided into nine instalments, (kist) which are payable, at the first nine new moons, which appear between the 11th of September, and 13th of June. Before the last of these has become full, the whole must be paid : otherwise eight or ten sipāhīs, the subsistence of each of whom costs him from four to eight ānas a day, are, in the first place, quartered upon the zamīndār : if he still refuses payment, his property is attached and sold, and he and his children are imprisoned, with irons ten sérs in weight attached to their feet, in the b'haksī, a place of confinement in every faujdār's

thongs, till blood is drawn. They are immured in this way for two years, perhaps, and then released on personal security, or on payment of the sums originally demanded, or on providing substitutes to take their places: or they are thus kept in prison, until they are reduced to beggary.

When a zamīndār gets intelligence of the approach of a chaklédār having sinister intentions, he either musters his followers and gives battle, or flies to the neighbouring jangal with his family, and immediate dependents; previously, in many cases, making a summary levy of arrears from the raīyats, and leaving them to the mercy of the chaklédār, who, on his arrival, also endeavours to enforce payment from them. Rāmpūr, D'higons, and Derā are zamindārīs held by three brothers, who each pay regularly 100,000 rupees of revenue; but still think it prudent to be prepared with a force of 9,000 men to repel any interference on the part of the chaklédār, and are therefore never disturbed by him. Bant'har, in Bainswārā, is the residence of a t'hākūr, named Kesrī Sing'h Gaur, who pays 150,000 rupees of revenue, and maintains 1,000 matchlock-men. With this force he has defeated, and slain two of the revenue authorities;—in 1817, Sobhā Ram (a kāyath) chaklédār, and in 1820 Shaikh Karīm-bakhsh faujdār. After each victory, his troops at the same time dispersing with their families into the neighbouring towns and jangals, he fled into the j'hau jangal, in the low kachār lands on the bank of the Ganges, and remained there 3 or 4 months, until his peace was made. Since then, he has several times taken refuge

The cannonading of forts and villages by the *chaklédār* is a sound very frequently heard, for days together, at the cantonment of Sultānpūr. He uses shot of hammered iron, having none of cast iron, and often substitutes cylindrical billets of wood, which answer every purpose, as they make a greater *noise* than shot, in whizzing through the air. During the reign of Saādat Alī, a single cannon-shot could not be fired by a *chaklédār*, without being followed by immediate enquiry from Lak'hnaū, as to its cause :—now, a *chaklédār* may continue firing for a month, without question.

SECTION 3.—POLICE.

The Army of Oud'h, excluding the brigade raised by Local Colonel Roberts, is an ill-paid, undisciplined rabble, employed generally in coercing, under the *chaklédār's* orders, the “refractory” zamindars of his districts ; in conveying to Lak'hnaū, under the exclusively military orders of their own officers, the revenue when levied ; and, occasionally, in opposing the armies of plunderers, who harass the eastern districts of Oud'h.

A regiment (*paltān*), of which there are about 45 in the service, consists of 12 companies (*tuman*), each of which, when complete, is 100 strong. Half of this army is sometimes under the orders of one *chaklédār*.

The military officer of highest rank, that is generally seen in the provinces, is the regimental commandant (*komandān*). His pay is five rupees a day, and he

for zamīndārs, suffering under temporary difficulties, in paying their quotas of the revenue. This is an authorized arrangement, and he is allowed five per cent. on all sums, for which he may thus become security. No insolvent zamīndār will voluntarily place himself in a chaklédār's power, unless the komandān becomes his security; as he is otherwise certain to be imprisoned and tortured, if not hanged. If the chaklédār afterwards make any unforeseen and unreasonable demands, the zamīndār requests that the security bond, which is always sent to Lak'hnau, may be cancelled; and, having ascertained that the komandān has thus been freed from all responsibility, flies to the jangal. Mīr Agha, komandān at Sultānpūr, was, at the time when these notes were written, security to the amount of 200,000 rupees, for the neighbouring zamīndārs.

The officer next in rank to the komandān, and equivalent to major, is the faujdār, who is entitled to three rupees a day, and sundry nazars, and is removable from one paltan to another. He is occasionally relieved from regimental duty, and employed in the collection of the revenue, as has already been mentioned.

To each tuman are attached a tumandār, whose pay is 15 rupees per mensem, and five dafadārs who receive five rupees, paid in full. With each tuman there are a flag carried by a nishānbardār, whose nominal pay is five rupees, but who receives only four, and two musicians at three rupees each, one of whom plays the j'hānja, and the other the kandāl. There are also for the whole paltan, or its head-quarters, one turluhī (like a French horn), one d'hol (a wooden drum, carried by

a man on foot), and one nagāra or tarfā marfā (a brass drum, provided, like the turluhī, by the state, and painted with the royal arms, the performer on which is mounted on a horse, also the property of the state.) All these musicians have three rupees pay. A bājā-mèjar at five rupees, who does not himself play in public, but teaches the other musicians, has the charge of the *band*.

The nominal pay of the sipāhī is four rupees, but he receives only three, issued once in every three or four months, and kept much in arrears: he has also to find his own arms and ammunition. He gets no regular leave to his home, but *takes* it occasionally for ten or fifteen days at a time; and little notice is taken of his delinquency by the tumandār. There is a muster, once in every five or six months; and the man, who is absent from it, gets no pay.

This army has no fixed cantonments, no parades, no drill, and no tactical arrangement: when one pāltan is fighting, another may be cooking. Encounters hand to hand are thought disreputable, and distant cannon-ading preferred, or a desultory matchlock fire, when no artillery is available. There is no pension or other provision for the severely wounded, who, eo facto, are out of the service, and return to their homes as they can. There is no uniform, except the turband, which is of one colour, either dark blue or red, for each regiment. The paltans and tumans are each named after their respective komandāns and tumandārs. They have no tents; but when they make a halt, if only for two days, they build huts for themselves, covering them

The army has thus degenerated since the reign of Shujā ud Daulā (1775), when the sipāhī had a pay of seven rupees, and a firelock and uniform coat and pantaloons provided by the Government; when he had regular drills, parades, musters, and furloughs, and was allowed an assignment of land when disabled by wounds or other causes: his children also had preferable claims to enlistment. Commandants had ten rupees a day, and subadārs from three to five, havildars fourteen rupees a month and nā'èks twelve. Those troops fought well.

SECTION 4.—SUPPRESSION OF CRIME.

Zamīndārs were by Saādat Alī held answerable for any theft, robbery, murder or other act of violence, that might be committed within the limits of their estates; and this principle was enforced by his chaklédārs: but since his death, no court of justice has been held by the nawwabs, and the chaklédārs attend to nothing, but finance. Nothing is said about a murder or a robbery; and, consequently, crime of all kinds has become much more frequent, especially within the last sixteen years, and in the smaller towns and villages. Gang-robbery of both houses and travellers, by bands of 200 and 300 men, has become very common. In most parts of Oud'h, disputes about land, and murders thence originating, are of very frequent occurrence: feuds are thus kept up, and all opportunities of vengeance laid hold of. No traveller goes unarmed, and he is frequently seen bristling, at all points, with sword, spear, dagger and matchlock; but such has always been the custom in Oud'h. Choukīdārs are maintain-

ed, in all large towns, by the zamīndār, who allows them five big'hās rent-free, for that service, and the office is generally hereditary : a town of 5,000 inhabitants may have ten chaukīdārs (watchmen.)

Pīpar, five miles N. N. E. of Gondā, in Amét'hī, contains a population of 4,000 ch'hatrīs, who are robbers by profession, and inheritance : every bullock and horse stolen, in this part of Oud'h, finds its way to Pīpar. It is surrounded by a thick jangal, which extends six miles from each side of the town, although much of it has, at different times, been cut down by order of the government. About seven years ago, the chaklédār punished them severely, and burnt their town, since which event their enterprise has somewhat abated, their expeditions being chiefly nocturnal, and arranged in parties, from 10 to 20 in number, who go on foot, in all directions, to the distance of 15 or 20 miles, and are back by daylight : they steal and rob, but do not murder. When their neighbours discover a theft, they go in small parties, from 10 to 20 in number, by daylight to Pīpra, and take back their property by force. There are no troops, or police of any kind, stationed there.

Four miles east of Niwardīpūr is a nālā, where two dead bodies, recognized, by the shortness of the hair, to be those of sipāhīs in the Company's service, were found six years ago. Rāja Sheo Dat Sing'h of Kait'haulā made a search for the murderers, and found them to be two t'hags, inhabitants of two houses, named Muhaniyā Kunjī kā Pūruā, situated on the low bank, which they cultivated, of the nālā, and were

the neighbouring villages. Five sipāhī's coats, with corresponding articles of dress, were found in the houses, also a running noose, made of leather, with a pice inclosed in that part of it, which would press against the throat; and on this evidence the t'hags were instantly beheaded with a sword, and their bodies hung up, on the spot, where the murder was committed. It is doubtful however, whether they were members of the regular fraternity, who traverse every part of Oud'h.

Sārangpūr, ten miles south of Tāndā, has a population of 9,000 hindū thieves, dakaits (gang-robbers), and t'hags, whose depredations extend as far as Lak'hnaū, Gorak'hpūr, and Banāras. An officer of the t'haggī department paid this place a visit in 1834, accompanied by a female approver, whose husband had been convicted of t'haggī, and executed on the evidence of some of his accomplices, and who had vowed vengeance against the whole order, (a vow which she faithfully kept); but she was unable to identify any of the brotherhood at this town. In Oud'h, the t'hags are called Nēwātīs.

In November 1834, Tāndā, and its neighbourhood were plundered by the notorious freebooter Fatteh Bahādur of Do'ārkā, who surprised and defeated the faujdār, and a toman of 100 men stationed there, and carried off about 100 of the principal inhabitants, who, on pain of death, were compelled to procure their own ransom, at sums varying from 50 to 400 rupees. Of this outrage no notice was taken, by the go-

Criminal offenders, flying from the Company's provinces, are apprehended by the *chaklédār*, on the requisition of the British authorities : but the obligation is not reciprocal. The Company's subjects, on the frontier, are understood to be authorized, and directed to keep arms, for the purpose of repelling aggression, on the part of the lawless population of Oud'h ; but they never retaliate forcibly,—they lay their complaints before their own civil authorities. The whole country, between the *Gumtī* and *De'ohā*, is a scene of violence and devastation, chiefly caused by the turbulent and rapacious propensities of the *Rāj-kumārs*, formerly, and occasionally still called *Bachgotīs*, of which tribe some families became *Musalmāns*, under the name of *Khanzādas*, and are now dispersed throughout the *Sultānpūr chaklā*, at *Hasnpūr*, *Manīyārpūr*, *Amahat*, *Gangéo*, &c. The names of the present principal leaders are *Futteh Bahādur* of *Do'ārkā*, *Mādhū Sing'h*, *Sarap Dawan Sing'h*, *Sudist Narāyan*, *Isrībakhsh*, *Shankarbakhsh*, and *Sag Rām Sing'h*, all related to each other, and constantly engaged in mutual aggressions.

SECTION 5.—CIVIL JUDICATURE.

A bond is of no use, unless its holder be (*a-zōr-wālā*) under protection, either by having native friends at court, or by being in the Company's service, and having his claims preferred through the British Resident. Money, therefore, is almost universally borrowed on pledge of property, either personal or real. In the case of real property being pledged, the deed is witnessed and sealed by the *kāzī*, and *kānūngó*, also by

to the deed. Twelve per cent. is the usual rate of interest agreed upon. The borrower frequently repossesses himself, by violence, of the ground pledged, if he sees the influence of the lender on the ebb with the *chaklédār*. The minister (*sūba nā'ib*) will not investigate a case of this kind, unless he receives a *nazar*, when summary justice is done by the dispatch of a note to the *chaklédār*, who dares not disobey an order of this kind.

SECTION 6.—ADMINISTRATION OF THE TILOIN RAJAS.

Amid this wide-spread social waste, there is one pleasing oasis presented to the eye, in the small district of Salon, which has, for many ages, and with scarcely any interruption, been under the patriarchal government of a Ch'hatrī family, the lineal descendants of the ancient Hindū sovereigns of Oud'h. For a long series of years, including the government of Safdar Jang, (1739—1753) their possessions embraced the whole breadth of Oud'h, from Faizābād to Mānīkpūr. During the reign of that prince, the representative of the Hindū family was Udéb'hān Sing'h, who was succeeded by his son Balb'haddar Sāh. About the year 1760, the son and successor of Balb'haddar Sāh threw off his allegiance to the nawwāb, who solicited the aid of the British Government. Six regiments were sent to his assistance, and three of them came up with the rebel rāja, at the Kādu ka nayā (or nālā), six miles east of Jāyis, where he was defeated, and slain. His son and surviving followers betook themselves to the jangals, where they subsisted on the tribute levied

from four or five villages. The whole province of Oud'h having at this time fallen into disorder, and the nawwāb being pressed by financial difficulties, the fugitive rāja was invited to Lak'hnau, and was invested with the Government of the estates, which were subsequently divided among, and are still held by, seven of his descendants.

The eldest of these, Shankar Sing'h, is styled Rāja of Tiloi, and the family collectively called Tiloin, from the name of his residence, which is an ancient kachā fort, containing many handsome pakkā buildings, nine miles north of Salon, inhabited by a population of 10,000 persons, of whom one-third are mūsulmāns, exclusive of 1,000 personal followers of the rāja. The revenue paid by him, for the whole Tiloin zamīndārī, is 750,000 rupees, which the chaklédār receives regularly, and without having any pretence for, or making any attempt at undue exactions; the assessment being allowed to remain at the old standard of two rupees per big'hā of old arable soil, and one rupee for newly reclaimed land. The same rate of taxation prevails on the small estates immediately bounding that of the rāja, although the lands beyond *them* are, as usual, assessed 50 per cent. higher; but there is a regular influx into his domain of raīyats, who dread the risk of oppression by the chaklédārs.

His five brothers, by courtesy styled rājas, and his nephew, called the t'hākūr, reside at the places, and pay the revenues here specified:—

Résī, five miles north of Jāyis. A kachā fort with

500 of the rāja's own followers. Assessment 150,000 rupees.

Jāmbo, a fort five miles east of Résī: 7,000 inhabitants of whom $\frac{1}{2}$ are mūsalmāns, besides 400 followers of the rāja.

Kait'haulā, two miles east of Niwardīpūr, and nearly surrounded by the windings of the Saī, 8,000 inhabitants, all hindūs, besides 500 or 600 of the rāja's personal attendants. The revenue is only 12,000 rupees, of which 8,000 are paid into the public treasury, and 4,000 allowed to the rāja as nānkār. Formerly this estate extended to Mānikpūr, but has been encroached upon by the Biséhan zamīndār, whose family (ch'hatrīs) have risen into importance within the last 100 years, and who now pays 300,000 rupees of revenue.

Simrautā, a little to the east of Rāé Barélī. A kachā fort with pakkā buildings, and a town containing 8,000 inhabitants, and 500 armed followers of the rāja.

Rāmpūr, twelve miles north of Mānikpūr. A fort and town with 4,000 inhabitants, of whom $\frac{1}{4}$ are mūsalmāns and all cultivators. The t'hakūr has 1,000 fighting men, and pays 100,000 rupees of revenue.

D'higons; 8,000 inhabitants, all hindūs. The zamīndār pays 100,000 rupees of revenue.

Déra, two miles north of D'higons. Population

The zamīndārs of D'higons, and Déra are brothers of the Rāmpūr thākur, and can, conjointly with him, bring into the field 9,000 armed followers to repel the chaklédār, who therefore gives them no trouble. In 1832, having a force of 10,000 men at their command, they were tempted to attack their uncle at Kait'haulā, and lost 200 men, by the fire of the guns of his fort. Having stormed it, they put to death an equal number of its defenders, and plundered the fort. The rāja, with his 300 surviving men, fled to the rāja of Tiloi, who, by threatening to attack his turbulent nephews, if they did not withdraw from the Kait'haulā rāj, induced them to abandon their conquest, and reinstated his brother in his former possessions.

With the exception of this disturbance, the district of Salon has long enjoyed a degree of tranquillity unknown to any other part of Oud'h. No mēlā, hāt, town, village or traveller has been plundered by either chaklédār, neighbouring zamīndār or other depredator. Murder is unknown: and in open hostilities it has ever been the rule to spare an enemy, who laid down his arms. Even in the country immediately surrounding the Tiloin estates, private robbery is unknown, except as a consequence of boundary disputes, which generally terminate in a battle, followed by the plundering and burning of the village of the defeated party, who then complain to the chaklédār, but without ever receiving redress. When similar disputes occur within the Tiloin boundary, they are instantly put down by the rājas, and speedy justice afforded. The rājas also investigate all criminal cases occurring within their estates, and send the parties, when convicted,

anticipate any difficulty in apprehending criminals, they apply to the darbār for assistance, which is given to them, through the chaklédār. Civil suits also are investigated, and adjudicated in a summary manner, by the rājas, the just claimant being informed, that his demand shall be satisfied out of the defendant's first crop, should any surplus remain after payment of the revenue ; but that, should this surplus prove insufficient to discharge the debt, no further judicial process shall take place in that suit. Bonds are unknown.

When the chaklédār is engaged in collecting the Tiloin revenues, he is accompanied by the rāja of that portion of the estates, who in general has little difficulty in persuading the sub-zamīndārs to pay, without demur, the due instalment, which the rāja then hands over to the chaklédār. When the zamīndār is obstinate, he is left to be dealt with by the chaklédār, who puts him in fetters, and levies the rent from the raīyats, keeping the zamīndār under restraint, until he gives security for the future regular payment of his rent : he cannot, however, make any undue demand from the zamīndār ; and this being known to the neighbouring zamīndārs, they sometimes make successful appeals at Lak'hnav, against the chaklédār's exactions.

The head of this family pays an annual and politic visit to the king ; and twice a year, on the occasions of visiting, and being visited by the other members of his family, receives from them a nazar of 1,000 or 2,000 rupees : even should circumstances prevent the interviews, the nazars are paid. The household wants of the rājas are supplied, by mahājans from Lak'hnav,

taught to write the Kāyat'hī, Devanāgarī, and Persian characters, and to read Sanscrit, by pandits who are allowed lands for their maintenance. Persian and Arabic literature form no parts of their education; but the services of an English teacher would be accepted, and well remunerated.

CHAPTER XI.—POPULATION OF THE TOWNS AND PRINCIPAL VILLAGES.

Achalganj, a town in Bainṣwārā, one mile N. E. of Harhā. Population 5,000, of whom 500 are musalmāns, (the rest, of course, being hindūs.)

Agai, a town in Partābgarh. Population 8,000, all hindūs.

Agai, a village in Sultānpūr, eleven miles N. W. of Sultānpūr cantonment. Population 400, all hindūs.

Aghāganj, a village in Aldemau. Population 200.

Akbarpūr, a village in Aldemau. Population 1,000, of whom two-thirds are musalmāns, including many weavers.

Aldemau, an ancient village in the chaklā of that name, 3 miles W. of Rāmṇagar. Population 400, of

whom 300 are musalmāns. There are many shops for cloth, and other merchandise, kept by hindū banīyās. A small kachā fort, close to it, is mounted with two guns, and is the station of a faujdār.

Alīganj, a village in Sultānpūr, 12 miles N. W. of the cantonment. Population 100, all hindūs. There is a bāzār of 60 shops, and a hāt attended by between 300 and 400 shopkeepers.

Amahat, a village in Sultānpūr, close to, and on the N. side of Pādshāhganj. Population 500, of whom 400 are musalmāns.

Amānīganj, a village in Sultānpūr, five miles south of Rudaulī. Population 300, all hindūs. About 500 people generally come to the hāt held here. Much cotton is purchased by banīyās, from be'opārīs, who bring it for sale on hackeries and bullocks.

Amét'hī, a town in Partābgar'h. Population 10,000, all cultivators, of whom one-fourth are musalmāns. There is a small fort, without cannon, the residence of the faujdār. This place is usually the station of a paltan, with its commandant and faujdār, and of an artillery train consisting of ten heavy guns, and four 13-inch mortars (hôt) made of āt'hd'hāt, a mixed metal supposed to contain eight ingredients, and cast in the reign of Mansūr Alī (Safdar Jang): there is a good supply of shells with the mortars.

Attānagar, a town in Šalon. Population 6,000, all cultivators, of whom two-thirds are mūsalmāns. It is

four miles east of Salon. A large proportion of the recruits for the king's army comes from this neighbourhood.

Awad'h (vulgò Oud'h and Oude) also called Aju-d'héā, the remnant of the ancient city of Ayod'hyā, a town in Pach'hamrāt, close to, and on the east side of Faizābād. Population 8,000, of whom 500 are mūsalmāns. Pakkā houses extend along the river Sarjū all the way to Faizābād.

Bābū kā pūruā, a village in Sultānpūr, one mile N. of Rāg'ho. Population 150, all hindūs.

Bachranw, a town in Bainṣwārā, two miles S. of Nagarānw. Population 5,000, of whom only 100 are mūsalmāns.

Badarkā, a town in Bainṣwārā, two miles N. of Har'hā. Population 8,000, of whom only 50 are mūsalmāns.

Baihār, a town in Bainṣwārā, twelve miles E. b. S. of Ranjīt-pūruā, and two miles from the Saī. Population 4,000, of whom 50 are mūsalmāns.

Baliyā, a town in Partābgarh, five miles S. of Pīprā. Population 6,000, all hindūs and cultivators. An immense jangal surrounds it; yet the zamīndār does not take advantage of this circumstance to evade the financial requisitions of the state.

Band'huā-Hasnpūr, a fort and village, five miles W. of Sultānpūr cantonment. Population 500 hindūs and 100 mūsalmāns, including the armed retainers of the rāja, who resides there.

Bant'har, a town in Bainṣwārā, two miles N. W. of Badarkā. Population 5,000, of whom 150 are mūsalmāns, and 1,000 matchlockmen in the service of a t'hakur, named Kesrī Sing'h Gaur.

Baraunsā, a village in Sultānpūr, five miles E. of the cantonment. Population 300, of whom 100 are mūsalmāns.

Basantganj, a walled town in Salon, five miles S. W. of the capital of the district. Population 6,000, of whom one-half are mūsalmāns. A tumandār and 15 sipāhīs guard its gate.

Batsārī, a village in Sultānpūr. Population 300 hindūs.

Bél'hā, a town on the left bank of the Saī, in Partābgar'h, five miles E. of the town of the latter name. Population 3,000 hindūs.

Bél'hāghāt, the local name of the town of Partābgar'h, q. v.

Bést'har, a town of Bainṣwārā, two miles S. E. of Har'hā. Population 4,000, of whom 600 are mū-

Bètīgānw, a village in Ahlādganj, six miles S. of Mānikpūr, and the unhealthiest spot in the S. of Oud'h. See p. 15.

B'hadarsā, a town in Pach'hamrāt, the seat of an eleëmosynary establishment, endowed by Asaf ud Daulā. See page . Population 5,000, of whom 2,000 are mūsalmāns.

B'hadīnyā, a town in Sultānpūr, two miles N. W. of Pāpar. Population 2,000, of whom 100 are mūsalmāns. It is the t'hānā or station of a faujdār, who is a relation of Futteh Bahādur of Do'ārkā. Here is a ruined fort, formerly held out by Sheo Dé'al Singh against two chaklédārs, both of whom fell during the siege. It was at last destroyed by the British troops under Colonel Faithfull, but rebuilt by Sheo Dé'al Singh's son, Shankarbakhsh, and maintained by him in 1836 against the chaklédār, who took and demolished it, notwithstanding the endeavours of Harpāl Singh, zamīndār of Bait'hū to obtain its transfer to himself, with its defences unimpaired. After the final destruction of the fort, most of the raīyats left the ground adjoining to it, which now yields only 9,000 rupees, while it formerly produced 40,000.

B'hadrī, a fort and town in Ahlādganj, near the British frontier, S. E. of Bihār. The zamīndār, Jag Mohan Sing'h, resisted all the Oud'h forces, in that vicinity, for two years, until, in 1834, all the disposable forces of the country under Sheo Dīn Bārī the commander-in-chief, with about 100 guns, were sent to destroy him. He escaped, with his ten guns, to the

Company's territory, and had transported all his forces except himself, his guns and 100 men, across the Ganges at Chaunā-g'hāt, twelve miles above Allāhābād, when the nawwāb's forces came up with him, put him to death, with the 100 men, who remained with him, cut off his head, and with this trophy and the ten guns marched back into the Oud'h territory, plundering three of the Company's bāzārs on their way. Through the influence of a civil officer at Allāhābād, Jag Mohan Singh's son was placed in possession of his father's jāgīr, and now holds it.

B'hānrā, a village in Sultānpūr, five miles N. W. of the cantonment, and one mile from the Gumtī. Population 400 hindūs.

B'hawānīganj, a town in Ahlādganj. Population 6,000, of whom one-third are mūsalmāns.

Bhitargānw, a town in Bainswārā two miles E. of K'hirōn. Population 4,000, of whom 50 are mūsalmāns.

B'hojpūr, a town in Bainswārā, twelve miles E. b. S. of Daundiāk'hērā. Population 9,000, of whom 150 are mūsalmāns.

Bihār, a town in Ahlādganj. Population 10,000, of whom half are mūsalmāns. Here is a fort mounting eight or ten 24-pounders, which is the t'hānā of a faujdār; and a paltan is generally sta-

Bigahpūr, a town in Bainswārā, one mile W. of Terhā. Population 6,000, including about 100 mūsalmāns.

Bihtā, a village in Bainswārā, eight miles N. W. of Tāng'han, noted for its manufacture of salt.

Chāndīpūr, a fort in Aldemau, twelve miles E. of Tāndā.

Chhotā Mīrzāpūr, a town in Partābgar'h, S. of Médnīganj. Population 3,000, all cultivators, of whom half are mūsalmāns.

Chauras, a town in Partābgarh. Population 4,000, all hindūs and cultivators.

DALAMAU, an ancient city in Bainswārā. Population 10,000, (of whom 250 are mūsalmāns), and chiefly cultivators. There are two large old shiwālas (hindū temples) on the bank of the Ganges; and on the S. W. side of the town, is an ancient pakkā g'hāt, which is the place of tīrat'h (see page 74.) Here is a pakkā fort one mile in circumference, with eight bastions mounting four 6-pounders, and occupied by a fauj-dār: its walls are 50 feet high externally, and 25 internally.

Dalpatpūr, a village in Pach'hamrāt, on the Dé'ohā, eight miles E. of Faizābād and three miles W. of Jalā-luddīnnagar. In 1837, Harpāl Sing'h was building a mud fort at this place, covering an area of 4,000

big'hās, 500 kūlīs (labourers), besides artisans from the neighbouring villages were employed. The wages, which he paid, were one and a half āna a day for kūlīs, two ānas to carpenters for making doors, rafters, &c., and two ānas to the t'hawaīs, who build the mud walls.

Daundiāk'hēra, a town in Bainswārā. Population between 8,000 and 9,000, of whom 250 are mūsalmāns.

Déhrā, a village in Aldémau. Population 200, of whom half are mūsalmāns. Here is a fort garrisoned by the zamīndār Mād'hū Sing'h, the paternal brother of Fatteh Bahādur of Do'ārkā, with whom he has frequent skirmishes.

Déra, a town in Ahlādganj, two miles N. of D'higons. Population 8,000 hindūs.

D'higons, a town in Ahlādganj. Population 8,000 hindūs.

Do'ārkā, a fort on the left bank of the Gumtī, in Sultānpūr. It has no artillery, but is garrisoned by 1,000 men, the followers of Fatteh Bahādur, a notorious freebooter. His father Pahlwan Sing'h, his uncles Jorāwar Sing'h, and Sag Rām Sā'ī, and his grandfather Zālim Sing'h carried their depredations so far, habitually plundering all boats that passed the fort, and having on two occasions intercepted the pay sent from Jaunpūr, for the troops at Sultānpūr, that, about 1812, it was thought necessary to make an example of the thieves. Accordingly, the present 42d Regiment of Native Infantry, then stationed at Sultānpūr,

left one company to guard that cantonment, and reinforced by a wing, and four guns from Banāras, and a paltan with twenty-two guns under the chaklédār Ghulām Hussain, all under the command of Colonel Faithfull, after breaching the fort, took it by assault, with the loss of one officer, and about eight sipāhīs of the British force killed : and the place was for some years occupied by a detachment of two companies from Sultānpār. Sarap Dawan Sing'h, the son of Jorāwar Sing'h, commanded the fort during the siege and assault, and now lives at Mérhā in the Azīngarh district, where he and other members of the family have lands assigned to them by the Company. Fatteh Bahādur, then a boy and now about 30 years of age, was present at the storming of the fort, and after the withdrawal, six years ago, of the British detachment, repaired and re-occupied it : he is now the terror of all Aldeman, which at different times he has ravaged in all directions, as far as Tāndā. He is a troublesome subject to the Oud'h Government, paying no more than the old assessment of his lands, 50,000 rupces, and being prepared for resistance or for flight, should any additional demand be made. Boats, unprotected by the presence of an European, are subjected to undue detentions and exactions, when passing Do'ārkā, and some other points on the Gumtī. In 1836, Gaj Rāj Sing'h, a zumīndār of the Jaunpūr district, who had purchased among some others the village of Kasaipūr, situated on a patch of British territory, which is insulated by that of Oud'h, extended his collections of rent to some villages, within the Oud'h frontier, which had originally belonged to Fatteh Bahādur. That maraudar having detached 500 men

partisans to the number of 4,000 men, from the neighbourhood of Singrāmau in the Company's territory, and attacked Fatted Bahādur's force, but was repulsed with the loss of 150 men killed, and was subsequently fined 5,000 rupees by the British authorities, and imprisoned two months, for having thus violated the territory of Oud'h. He still retains the village of Kasaípūr.

Dostpūr, a village belonging to the Do'ārkā zamīndār, 9 miles S. W. of Sahjadpūr.

FAIZA'BA'D, an ancient city on the right bank of the Dé'ohā. By the hindūs it is named Banglā, and Ajudhéā, which latter appellation however more properly belongs to the adjacent city of Awad'h. The population is about 100,000 including 10,000 mūsalmāns, and is annually decreasing by emigration into the Company's territory, or wherever peace and security may be obtained, from the exactions of the bégam's karindas (agents.) Every thing that enters the town is heavily taxed. The chief manufactures are cloth, metal vessels and arms, and there is a mint for the coinage of Shérshāhī rupees. The ruins of the two cities extend 10 miles along the Dé'ohā, and 2 miles inland. The neighbouring territory, which constituted the magnificent jāgīr of the Bahū Bégam, the Nawwāb Asaf ud Daulā's widow, and yielded a revenue of 800,000 rupees, has, since her death in 1815, through a course of inefficient female management, during the minority of the present heir, and in consequence of the absence of any protecting care on the part of the king, been greatly reduced in extent and value, by the encroachments, burnings, and plunderings of the chaklédārs, and

sesses the parganas of Rāt and Magarsī, besides Tandaulī, Haidarganj, and Dārābganj in Aldemau, about 12 miles W. of Tāndā. No zamīndārs venture to settle on the estates, and the raiyats cultivate them at their own risk, the neighbouring zamīndārs annually plundering and laying waste all before them, “because it is the unprotected jāgīr of the ch’hotī bégam,” until it has become bè-chirāgh, “lampless”—without a hearth. Harpāl Sing’h, and Darshan Sing’h are the principal aggressors, each of them having, within the last 5 years, thus possessed himself of lands yielding a revenue of 300,000 rupees. The public belief is, that this was done, with the connivance of the late king, his name having been made use of by the intruders, who engaged to pay into the royal treasury one half of their ill-gotten spoil. They have realized this increase of revenue by augmenting the assessments one-fourth, one-third and half in different places. That the lands thus unlawfully acquired, and more heavily burthened are, however, in a thriving condition, may be seen in the incidental notices of their condition, which occur in the preceding portions of this sketch.

Gangéo, a village in Sultānpūr, on the Gumtī, and 3 miles below Hayūtnagar. Population 400, all mūsalmāns (Khanzādās), many of whom are scattered in smaller villages.

Gar’hā, an ancient fort on the right bank of the Gumtī, three miles E. of Pāpar. It was built, by one of the B’har sovereigns of Oud’h, of stone brought by water from Naipāl, and fell, soon after the capture of

invaders, who destroyed the upper portion of its walls, leaving only eight or ten feet of them standing. The ruined portion has since been restored, partly in brick-work, and partly in mud. The stone wall rises out of the bed of the Guntī, and exhibits many sculptures and inscriptions in Nāgarī and Persian, setting forth its history.—These are the only remarkable inscriptions in the south of Oud'h: it contains no other historical monument.

Ghātampūr, a town in Bainṣwārā, six miles N. from Daundiāk'hērā. Population 4,000, including 50 mūsalmāns.

Gobre, a town in Salon, two miles N. of Gondā. Population 2,000, all ch'hatrīs, except 50 mūsalmān weavers.

Gogmau, a village in Salon. Population between 400 and 500. There is no zamīndār among the inhabitants, all being raīyats with small holdings. There is a jangal three miles in diameter, on the N. of the village; but it is never used by them, as a place of refuge from the chaklédār, who deals fairly by them. Their poverty protects them.

Gondā, a town in Partābgar'h, north of the town of the latter name. Population 2,000, all ch'hatrīs, except about 50 mūsalmān weavers.

Gotinī, a town in Ahlādganj, on the Ganges, two miles W. b. N. of Shāhzādpūr. Population 8,000, all

Har'hā, a town in Bainswārā. Population 6,000. S. W. of, and close to the town is a fort, in which the chaklédār resides, when not in the field. The amount of his proper force, (not government troops), is three paltans (so called) of from 40 to 100 men each, which are quartered in the town, with 100 sawārs (horsemen) and twelve guns. Of the guns, two (six-pounders) always remain in the fort: the others are 12 and 24-pounders, some of wrought iron, some of āt'hd'hāt. Kunnan Lāl P'hāt'hak, the present chaklédār, was appointed in 1837, and is the son of Amrat Lāl P'hāt'hak, the former chaklédār, who died in 1829; since which time Kunnan Lāl has resided at Lak'hnau, and also as chaklédār at Khairābād. The inhabitants of Har'hā are money-changers, dealers in fine cloth brought from Kanauj and That'hiyā, (the coarser kinds, such as gazzī and gār'hā being made here, as in every part of Oud'h), baniyās (dealers in grain), kunjars (sellers of tārī,—the fermented sap of the *borassus flabelliformis*), weavers, bird-catchers, pandits (learned brahmans and teachers), baidis (Hindū physicians), hakīms (mūsalmān physicians), many mūsalmān menial servants, raīyats and ex-raīyats who have become day-labourers, the former occupation now being less profitable.

Handyā, a pargana transferred from Oud'h to the Company about 20 years ago, in exchange for an equivalent in the Go'ārich pargana, N. E. of Faizābād. Handyā included the great bend of the Ganges between Allāhābād and Mīrzāpūr, which was infamous for the frequent attacks there made on boats navigating

the river, and contained the fort of Lachāgar'hā, which was at one time the stronghold of some desperadoes : but the pargana itself was not remarked as more prolific of crime, than other parts of Oud'h.

Hayātnagar, a village S. E. of Sultānpūr. Population 100, of which half are mūsalmāns. Here is a kot (redoubt), with a faujdār and 50 sipāhīs.

Hindaur, a town in Partābgarh. Population 3,000, all hindūs except 10 or 20 mūsalmān cultivators.

Hinu'a, a village in Aldemau. Population 500 hindūs.

Jalāluddīnnagar, a town in Aldemau. Population 1,500, of whom 500 are mūsalmāns.

Jambō, a town in Salon, five miles E. of Résī. Population 7,000, of whom half are mūsalmāns and 400 are followers of the rāja, who resides in the fort.

Jāyis, a decaying city in Salon. Population 9,000, of whom three-fourths are mūsalmāns. It stands on the left bank of the Naiā naddī, which runs into the Saī, and contains many large brick houses built by the mūsalmāns, in former times. It has manufactures of cloth and metals.

Kādīpūr, a village in Aldemau, eight miles S. of Mubārakpūr. Population 1,000. It is a faujdār's post, and has two guns.

Kait'haulā, a town in Salon, two miles E. of Néwar-

Kareihiyā-bāzār, a small village in Salon, one mile N. of Néwardīpūr. There are only 20 permanent inhabitants, but it is the resort of about 10,000 people on hāt days.

K'hirôn, a town in Bainṣwārā, fourteen miles E. of Ranjīt-pūruā. Population 5,000, of whom one-third are mūsalmāns.

Ko'érīpūr, a village near Kasaipūr, (see Do'ārka) situated in a patch of British territory, surrounded by that of Oud'h.

Kolwār, a village in Sultānpūr, eight miles N. W. of the cantonment, and half a mile from the Gumtī. Population 1,000, of whom 100 are mūsalmāns. It is the residence of the rāja Isrībakhsh, the representative of an ancient hindū family.

Kolhuāgar, a village on the Ganges, in Bainṣwārā, three miles S. of Har'hā. Population 1,000, all hindūs.

Kunsā, a town in Bainṣwārā, eleven miles N. from Daundiak'hērā. Population 7,000, including 50 mūsalmāns.

Lālganj, a village in Ahlādganj. Population 400.

Lauchar, a village in Sultānpūr, four miles S. from the cantonment. Population 300, of whom half are

Lilhā, a town on the left bank of the Gumtī, two miles N. of Sat'hinī. Some dyers reside here, and between 10 and 20 baniyās, dealing chiefly in grain, and Bundelk'hand cotton.

Madanpūr, a village in Aldémau. Population 300, of whom 200 are mūsalmāns.

Mahbūbganj, a village in Aldémau. Population 1,000, of whom 200 are mūsalmāns.

Mahdara, a village in Aldémau. Population 400 hindūs.

Makrahā, a town in Aldémau, intersected by the Tons, S. of Aghāganj. Population 6,000, all hindūs and cultivators. A faujdār is posted here with two guns and a paltan; but only 500 men are present.

MANIKPUR, a decayed city in Ahlādganj, on the left bank of the Ganges, along which it extends upwards of a mile. Population 10,000, of whom half are mūsalmāns. There is a very extensive pakkā fort, resembling that of Allāhābād, but in ruins, on the bank of the river. It is the station of a faujdār, and a tuman of 20 or 25 men, and has no guns. The traders are money-changers, and dealers in grain, cloth and metal vessels. Rāja Hēlā was sovereign of Mānikpūr, and of all the south of Oud'h as far as Sultānpūr, and built a large edifice called Shahābābād, which still stands on the N. W. of the city, sometimes gives its own name to the city, and is occupied by his descendant,

of a garden attached to the buildings and surrounded by a pakkā wall : it contains betel-nut trees, cocoanut trees which produce fruit, tār, orange, jāman and other fruit trees, which are perishing for want of care, the proprietor being too poor to maintain gardeners.

Manīyārpūr, a village in Sultānpūr. Population 1,000, of whom 300 are hindūs. There are two forts at this place.

Médnīganj, a town in Partābgarh. Population 20,000. It is a place of much trade.

Mé'opūr (the Meerpoor of the maps), a village in Aldémau, which belongs to the Do'ārkā zamīndār.

Mubārakpūr, a town in Aldémau, three miles E. of Tāndā, on the Dé'ohā. Population 3,000, of whom half are mūsalmān weavers.

Nagarānw, a town in Bainswārā, six miles S. of K'hirôn. Population 6,000, of whom 100 are mūsalmāns.

Nā'in, a town in Salon, three miles W. of Salon town. Population 10,000.

Naraul, a town in Ahlādganj, six miles S. W. of Rājapūr, and almost surrounded by the Company's territory. Population 6,000, almost all hindūs. Pillars of brick, from five to ten feet in height, or of stone five feet high divide the Oud'h and British dominions :

to the zamīndārs, so that no disputes occur about its position.

Nasīrābād, a town in Salon, three miles S. W. of Jāyis. Population 3,000, of whom three-fourths are mūsalmāns.

Naugonā, a village in Sultānpūr, eleven miles from the cantonment, and one mile E. of Saraon. Population 500 hindūs.

Newardīpūr, a town in Salon. Population 3,000 hindūs, including about 100 bhāts, who are cultivators, but subsist in part by their peculiar vocation, which is to go about, in parties of two or three, to the houses of different persons and to sing their praises (kabit). Like other travellers, they go armed with sword, spear and katār, and are not on these occasions accompanied by any instrumental music. They are paid in money sometimes, but more generally in arms and clothes. There are also mūsalmān bhāts in this part of the country.

Odarhā, a town in Bainswārā, thirteen miles E. of Ranjīt-pūruā. Population 3,000, of whom 50 are mūsalmāns.

Pach'hiānw kī Dēbī, a village in Bainswārā. Population 1,000, including 50 mūsalmān cultivators and servants.

Pādshāhganj, a village in Sultānpūr, two miles S. S. W. of the cantonment. Population 300, of whom 100

are mūsalmāns. A faujdār resides in a square pakkā building, erected 20 years ago, by the chaklédār Ghulām Hussain.

Paiht'hihā, a village in Aldémau. Population 400, of whom 100 are mūsalmāns.

Pālī, a large but decaying town near the northern boundary of Sultānpūr. Its population includes about one-tenth of mūsalmāns.

Pāparghāt, a deserted place, on the right bank of the Gumtī, in Sultānpūr, ten miles S. E. of the cantonment. Here Asaf ud Daulā projected the building of a new capital, and commenced a palace, on which 400 workmen were employed, three years, at a cost of 50,000 rupees. The kachā wall, surrounding the palace and a mosque attached, having been completed, the nawwāb went to inspect the progress of the work, when such a plague (marri) broke out among his attendants, that he abandoned the place and returned to Lak'hnaui, after giving orders for the erection of a temple to Débī, which still remains within the enclosure, as well as the mosque and palace. The enclosure, or fort, covers 2,000 big'hās, half of this extent being occupied by the palace, which was never roofed in, and of which the walls are sixteen feet high. In Chait (March—April), about 4,000 people go to pay their devotions at the shrine of Débī, but remain there only one night, for fear of sickness. The insalubrity of the place still continues, although it did not exist before the building of the fort, and is attributed by the hindūs, as well as the original discomfiture of the

ditch round the fort, and the broken nature of the surrounding ground, with a small nālā to the west of it, may be the causes of the unhealthiness of the locality. Half a mile south of this is the post of a faujdār, who keeps the temple and mosque in repair.

Paromé (Perone of the maps), a village in Aldémau. Population 200, including two mūsalmān families. Here are the remains of a kot, which was formerly of great height, but which after a long siege was about 50 years ago taken by the chaklédār, when the walls were reduced to their present height. It is now occupied by fifteen sipāhīs.

Parsādīpūr, a town in Salon, two miles distant from the Saī. Population 4,000, almost all cultivators, and three-fourths mūsalmāns.

PARTABGAR'H or Bélhāg'hāt, a city two miles S. from the Saī. Population 10,000, of whom half are mūsalmāns and almost all cultivators, there being no manufactures. The place is surrounded with a decayed kachā wall, and on its west side there is a kachā citadel in a ruinous state, but inhabited by a faujdār, and having its gate protected by two guns. Until 1834, there was a cantonment for one of the Company's Native Infantry Regiments, with two guns, about three miles to the N. E. of the city, on the right bank of the Saī, and on one of the healthiest spots of the Gangetic plain. The situation is elevated, though free from kankar, and the soil sandy but productive, water being obtained at about thirty-three

Paruā, a village in Aldémau, two miles east of Sāhganj, and on the right bank of the Tons. Population 500 hindūs.

Pīpar, a town in Partabgarh. Population 4,000 hindūs, a horde of thieves.

Pīrā nagar, a village in Salon, six miles N. E. from the town of the latter name, and on the Saī. Population 400, all cultivators, except a few weavers.

RAE BARELI or **Rā'é Baraulī** in **Bainswārā** is a decayed city with only 8,000 inhabitants, of whom 500 or 600 are mūsalmāns,—the population having dwindled from 50,000 within the last 25 years. It was formerly the seat of an extensive manufacture of cloth. Some shiwālas, but no mosques, are now built at this place; and many of its inhabitants, whose ancestors built the numerous ancient mosques, which it contains, are now sunk to the lowest degree of poverty. Here is a pakkā fort, in a state of disrepair, a mile in circumference, with a dry ditch, fifty feet wide, and twenty-five deep; walls eight feet thick, fifty feet high outside, and twenty-five feet inside; and twenty-four bastions mounted with four iron and brass six-pounders, which are occasionally withdrawn, when required by the chaklédār in the field. He visits Barélī at different seasons, and remains near it, in his tents, for twenty or thirty days at a time.

Rāg'ho kā pūruā, a village in Sultānpūr, on the right bank of the Gumtī, close to, and E. of Tārā.

Rāja ka bāzār, a village in Sultānpūr, on the Jaunpūr frontier.

Rāmnagar, a village in Aldémau. Population 400 hindūs.

Rāmpūr, a town in Aldémau, near Madanpūr, where much sugar is made. Population 1,000, of whom 300 are mūsalmāns.

Rāmpūr, a town in Salon, twelve miles N. of Manikpūr and E. of Salon town. Population 4,000, cultivators, of whom 1,000 are mūsalmāns. The zamīndār resides in a fort, and has 1,000 armed followers to keep the **chaklédār** in check.

RANJIT-PURUA, a city in Bainswārā, of which district it may be considered as the capital. Its inhabitants say that, in ancient times, it was like a little Lak'hnau ; and it still contains a population of between 50,000 and 60,000, of whom one-third are mūsalmāns. Here are a **kachā** fort mounting a dozen guns, where the **faujdār** resides, also many old **pakkā tāls** (market places), and substantial new houses built by mahūjans and brahmans. Cutlery is its only manufacture. Two or three of the king's paltans are always stationed here.

Rēsī, a town in Salon. Population 6,000, of whom one-fourth are mūsalmāns.

Sahanjīpūr, a village in Aldémau. Population 300

Sāhganj or Sā'éganj, a fortified town in Pach'ham-rāt, three miles S. W. of B'hadarsā, belonging to Bakhtāwar Sing'h, and the chief residence and stronghold of his full brother Darshan Sing'h, who is chaklédār of Bahraich, Khairābād, and half of Amondā, (the eastern half belonging to the Company), and maintains 3,000 armed followers of his own. The place has two kachā walls, with a wet ditch, six feet deep, between them. The circuit of the outer wall is nearly three miles; and it has twenty-four bastions mounting fourteen guns in all. Bakhtāwar Sing'h was a trooper in the 8th Light Cavalry, when only sixteen years of age; and being on furlough, and present at one of Saādat Alī's hunting parties, attracted the notice of the nawwab, who procured his discharge from the Company's service, and appointed him to the command of the shutr-sawārs or dromedary corps, a post which he still retains, and purchased for him the estate of Sāhganj, which now, after several augmentations of questionable origin, pays a revenue of 300,000 rupees. Darshan Sing'h gave his two daughters to Ghāzī ud Dīn Haidar, the first king of Oud'h, who took one of them in marriage (nikāh), and put the other into his haram. The walls of Sā'éganj were finished sixteen years ago, and the principal mansion about ten years ago; but there are in all sixteen (bédī) great buildings devoted to the accommodation of the masters of the town. On its east side are a jan-gal and the river Tons, here called the Marhā or Bisohī, a confusion of names, which has probably originated in repeated changes of its channel. There was formerly a nakkā bridge across the river at

inundation, and is now in course of being rebuilt with five arches of solid masonry,—probably the only work of the kind that is in progress in all Oud'h, lying in no great thoroughfare, and merely intended for the convenience of one zamīndār. In the fort, there are two squares formed of pakkā houses. The outer rampart is thirty-three feet high, and forty feet thick, and is mounted with ten of the guns, the remaining four being disposed at the gate of the palace, inside the fort. Both walls are thatched during the rains, to defend them from injury. Ten of the guns, it is said, were plundered from Gaurā in Bainṣwārā, and four purchased at a sale of condemned stores at Allāhābād, and afterwards “repaired” in Oud'h. Some sculptors from other parts of India are employed in decorating the palace, their materials being brought from the ruins of Faizābād, and the quarries of Mīrzāpūr; and glazed windows are introduced into the structure. Two of the buildings are designed as imitations of European architecture; and, in short, out of Lak'hnaū, these are the handsomest structures now erecting in Oud'h. Above ten laks of rupees have already been expended on the buildings and fortifications. The principal residence of Bakhtāwar Sing'h is Bhojpūr, on the right bank of the Ganges below Baksar, a locality which was the original residence of his family, and which is carefully eschewed by all travellers on that river. One of his recent acquisitions is the estate of Bābū Bariyār Sing'h, who was deprived of its possession by Ghāzī ud Dīn Haidar, and ultimately obliged to accept, about seven years ago, 50,000 rupees for his right to the property: he died in 1836, and his son Jai Dat Sing'h is by Darshan Sing'h allowed a pension of 500 rupees a

his own fort at Bhīt'hī, nine miles E. of Sahganj, but was then driven out of it by Harpāl Sing'h, one of the robber confederacy, who now holds possession of the fort. On this property, and five miles S. E. of Faizābād, has lately been erected a town, which already numbers among its inhabitants several mahājans of considerable property, and which is named Darshānganj, after its founder. The rack-rent system of the brothers is rapidly verging to a raīyatwārī settlement; the situations of the zamīndārs being made so uncomfortable, that instead of bringing up their sons to succeed themselves in the management of their present farms, they are obliged to send them into the Company's, and other military services: in many places the rate of assessment has been raised, from one to three rupees, within the past six years. Darshan Sing'h had purchased at the Collector's sale an estate called Béluā, in the Gorak'hpūr district, and about three miles from the Dé'ohā, opposite to Jalāluddīnnagar, for which property he paid 50,000 rupees, and to which he made his escape in 1836, when, in consequence of some disputed accounts, the king, after imprisoning Bakhtāwar Sing'h at Lak'hnaū, sent twelve sawārs (horsemen) to seize his brother. Bakhtāwar Sing'h is now about fifty years of age, and Darshan Sing'h above thirty.

Sahjadpūr, a town in Aldémau. Population 3,000, of whom two-thirds are mūsalmāns, and a large proportion weavers.

Salon, the name of a chaklā, pargana, and capital town. The rural population of the pargana are chiefly ab'batrīs: but in the town these are mixed with

Kānhpūriyā Rājputs, who betook themselves to their estates in Salon Khāss, on being displaced from the town, and its attached lands, by the Nawwāb Asaf ud Daulā, who made a grant of them, in jāgīr, to a fakīr named Miyān Pīr Attā, for the perpetual support of a religious eleēmosynary establishment. The present head of the institution is Miyān Pīr Ustrū, grandson of the first Miyān. He also is called a fakīr, though the mālik (proprietor) of Salon, and is said to expend only 100 rupees a month on his personal wants, although he keeps an elephant and horse, allotting the rest of his revenue, which is 30,000 rupees a year, to the entertainment of bairāgīs, and fakīrs, (hindū, and muslim itinerant mendicants), without distinction of religion. They come from all parts of Oud'h, and make each a short stay at Salon, there being generally about 100 of them in the town at one time. The miyān spends his time in attending to their wants, and in receiving visitors, hindū and musalmān, from all quarters of the province : when the chaklédār comes to Salon, he makes an offering of a few hundred rupees to the miyān. Population 4,000, of whom 1,000 are hindū cultivators, (brahmans, muraïs and kāchīs), and 3,000 mūsalmāns : among these are included 300 of the king's troops quartered there. In the town are many brick houses built by the ejected Kān'hpūriyās ; and on its south side, and close to it, is a small mud fort mounting two nine-pounders, (field-pieces), and occupied by a faujdār with fifty men, who are generally relieved once a month. There is no other religious establishment in the chaklas of Salon or Par-

Sanéhī, a town in Salon, six miles N. W. of Salon town. Population 6,000 cultivators, of whom half are mūsalmāns.

Sārangpūr, a town in Aldémau, nine miles S. of Tāndā. Population 9,000 hindūs, the most renowned thieves in this part of Oud'h. No faujdār is stationed here.

Sarāon, a village in Sultānpūr, half a mile N. of Bābū kā pūruā. Population 300 ch'hatrīs.

Sarendī, a town in Bainswārā, seventeen miles E. of Daundiāk'hērā. Population 6,000, of whom 100 are mūsalmāns.

Saungī, a town in Partābgār'h, three miles W. of Pīpar. Population 4,000, all ch'hatrīs and cultivators.

Simrautā, a town in Salon belonging to the Tiloin family. Population 8,000.

Sisrī, a town in Bainswārā and estate, purchased from the P'hāt'haks, by the late chaklédār Imrit Lāl, who bestowed much expense on the repairs of its numerous buildings. The estates held in his own name are assessed at 132,000 rupees, which sum constitutes only six-tenths of what he levies from the raīyats.

Sultānpūr, the name of a chaklā, pargana, town, and cantonment of the new Oud'h Auxiliary Force. In times within the reach of tradition, the pargana of Sultānpūr was an immense jangal, giving shelter to tigers, and sometimes to wild elephants. The town of Sultānpūr was then the capital of the B'hars, a tribe of low caste now extinct, whose possessions extended to Allāhābād, Banāras, Faizābād, and to within thirty miles of Lak'hnaū. The capital, then named Kosb'hāwanpūr, was eight miles in circumference, and was surrounded by a wall and bastions. It fell an easy prey to the first muhammadan invader, who is known to the present inhabitants by the name of the Sultān Bādshāh, (probably Kai Kūbād of the Ghaurī dynasty), who successfully employed the common stratagem, with improvements, of sending as an acceptable present to the B'hars, 500 dolīs (litters) laden with taulā, the fermented juice of the flower of the mahuā tree, but containing also the arms of the dolī bearers, who were picked soldiers. The garrison, who were all B'hars, not a brahman or ch'hatrī being within the city, soon became intoxicated, and were cut to pieces by the disguised muslims and their confederates, whom they admitted through the gates : the whole tribe was within a short time extirpated. The city and its walls were burnt, and razed to the ground ; and a new city was built on part of the site, to which the conqueror gave his own title for a name. The only supposed remains of the B'har city, now extant, are two brick wells at the south verge of the present town, and about a mile from the river, which still contain water, and a rising ground (dīh), called Maj'hār-

broken bricks, the remnants of the palace of the Bhar sovereigns. On the summit of the dīh is a partially ruined fort, built by the “Sultān Bād-shāh,” and containing houses, which are now occupied by the faujdār and his followers : there is also a mosque built by the Sultān, within the town and N. W. of the fort. There are two or three smaller mosques built by Saiyads, who are chaud’harīs of the pargana, and have salaries, varying from 100 to 500 rupees a month, besides rent-free lands, for keeping the revenue accounts of the pargana. The town, having no manufacture nor trade, is in a decayed state, and contains only 1,500 inhabitants, chiefly sipāhīs and personal followers of the chaud’harīs, with a few cultivators ; and of this population 1,000 are mūsalmāns. It contains many old brick dwelling houses, and a few new ones, among others a large one now building by one of the chaud’harīs, Muḥammad Alī, who was also the vakīl or envoy of the Lak’hnau darbār, “near” the commandant of the Company’s adjoining cantonment. His salary as chaud’harī is 100 rupees per mensem ; but he receives a bhènt (fee) of one or two rupees from many of the zamīndārs, and possesses villages paying about 20,000 rupees of revenue. He and his father have successively been in office about 50 years.

Sūrajpūr, a town in Bainṣwārā, three miles up the Ganges from Daundiāk’hērā. Population 2,000.

Tāndā, a town in Aldémau. Population 6,000, of whom 4,000 are mūsalmāns, chiefly weavers, this being the seat of the largest manufactories of cloth, in Oud’h.

Tandaulī, a town in Aldémau, five miles N. W. of Madanpūr, and eight miles W. of Tāndā, garrisoned by 500 men with two guns. Population reduced to 3,000, being only one-half of what it was, before the recent affrays with the chaklédār.

Tang'han, a town in Bainswārā, nine miles W. of Salon. Population 8,000 hindūs.

Tārā kā pūruā, a village in Sultanpūr, ten miles N. of the cantonment. Population 200 hindūs.

Térhā, a town in Bainswārā, eight miles S. E. of Harhā. Population 6,000, including 100 mūsalmāns.

T'haurī, a village in Sultānpūr. Population 400, all ch'hatrīs of the B'hālė-Sultān tribe.

Tiloī, a town in Salon, the residence of the Tiloī rāja. Population 10,000, of whom one-third are mūsalmāns.

Unchgānw, a village in Aldémau, S. E. of B'hadarsa. Population 400 hindūs. A faujdār is here stationed, in a kot garrisoned by 100 matchlockmen.

CHAPTER XII.—CHARACTER, CONDITION, • MANNERS AND CUSTOMS OF THE PEOPLE.

SECTION 1.—CHARACTER.

Many of the foregoing details, though they may seem foreign to the subject of medical topography, will, by every one who admits the paramount influence of social institutions in moulding the character of a people, be considered as essential materials for a general estimate of their moral and intellectual qualities, and capabilities. Keeping then in view the nearly absolute privation of the principle of government, in its protective and judicial functions, throughout the provinces of Oud'h, and the scope, unbounded save by the courageous resistance of the individuals aggressed, and the moderation of the aggressing party, thus given to the exercise of cupidity, personal dislike, envy, vindictiveness, and all the worst passions of human nature,—the limited amount of crime attributable to private and individual motive, that occurs in this country, must be considered as highly creditable to the natural humanity, love of justice, and forbearance of its inhabitants. That rapine, burnings and murder accompany the circuits of its revenue officers, and the predatory expeditions of the chieftains, who rule the eastern and wilder districts, is the misfortune, not the fault of the people, and the inevitable result of that mal-administration, which permits the accumulation of irresponsible power in the hands of unworthy persons who, as private

individuals, might prove harmless members of the community, but in whose unprepared and undisciplined minds the possession of unlimited power has produced its well-known and barbarizing effects.

SECTION 2.—TRIBES AND INTERMARRIAGES.

Bainswārā, being the largest, most populous and most orderly division of South Oud'h, affords a fair example of the national character, when undebased by frequent hostile collisions with either the officers of government or marauding zamīndārs. Frequent mention has been made of the commercial spirit and other good qualities of the inhabitants of this district, which may give some interest to the following slight sketch of their history and present state.

The founder of the Bains tribe of Rājputs is traditionally said to have been Tirlog Chand, who came from Ujain when Mālwa was governed by Vikramaditya, or about the commencement of the Christian era. He became the son-in-law of Gautam the rāja of Bainswārā, and at the death of that monarch succeeded him in the government of the kingdom, (which was then co-extensive with the limits of the present chaklā,) and became the progenitor of a large portion of the existing population. The other descendants of Gautam formed a tribe by themselves, and adopted his name as their general designation. Few of them are now to be found in Bainswārā,—no more than one or two families in each large town,—the bulk of the tribe having emigrated to the Do'āb; and they are generally in the condition of rājyats, but still call

themselves Rājputs, and are to be found in the ranks of the Company's army.

The people of Bainswārā have a tradition, that before their own country was occupied by the Rājputs from Rājwārā, and when it was a jangal inhabited by low-caste tribes now extinct, Kanauj was the great and flourishing metropolis of the Rājput sovereigns, Alhā, and Udāl, whose names still form the Rājput's battle-cry, and who conquered Hindūstān, and Bengal, as far as D'hākā. They had many brahman subjects at Kanauj, who however attained to no power in the state, nor acquired the possession of lands; and some of whom, migrating into Bainswārā after the accession of Tirlog Chand, were the first of their caste who had been seen in the country. They now outnumber the Rājputs, not only in Bainswārā, but throughout the kingdom, and are divided into the following *genera*, and *species* :—

The highest sub-caste or genus of Brahmans is the Misir, which is divided into these species, the Mad'hbanī taking precedence of all the others :—

Mad'hbānī	Markarā
Champāan	Jiginā
Patlāl	P'hariāinyā
Ratanwālā	Péparā
Bahdol	Hatèroā
Matol	Hat'hiyāparās
Katériā	Sugautī
Nagar	K'hètā

Gānā	Birhā
Teuntā	K'hausī
Kārīdīhā	Keutī
Marjanī	Baisī
Gurhā	Bhab'haiā

The Shukul sub-caste follows the Misir, and is thus divided, the Kak'haichk'hor taking precedence of the other species :—

Kak'haichk'hor	Malèn
Māmk'hor	M'hauliyār
Tipthī	Karbahiya
Bhērī	Chāndā
Bakarūā	Garag
Kanjahī	Gautam
Kandail	Sérāpār

Next follows the Tiwārī sub-caste thus divided, the Lonāk'hār being the first species in rank :—

Lonāk'hār	Panaulī
Lonāpār	Nandaulī
Munjaunā	Burhiyābārī
Mangrāich	Gūraulī
J'hūnriyā	Jogriyā
Sohgaurā	Dichit
Tārā	Sonaurā
Gorak'hpūriyā	Agorī
Daurūā	B'hārgo
Penrī	Bakiyā
Sirjam	Kukurgārīā
D'batārā	

Then follow the Dūbé genus, headed by the Kanchanī :—

Kanchanī	Lat'hīāhī
Sinj'hwā	Gurdwān
Bèloā	Met'hībér
Pāroā	Barhampūr
Keraiyā	Singiloā
Bargainyā	Kuchaloā
Panchanī	Munjaloā

Next come the Pātak (properly P'hāt'hak) genus, of whom the first in rank is the Sonaurā, and the Pāndé genus, which is thus arranged :—

Tirp'halā	Pichaurā
Joroā	Intiyā
Malainyā	Intār
Toraiā	Bèshtaul
Nākchaurī	Chārpānd
Parsihā	Silā
Sāhnkol	Ad'hurj
Barhariyā	

Next are the Upad'hyā sub-caste :—

Harainyā	Jait'hiyā
De'orainyā	Dahènr
K'horiyā	

Then come the Chaube sub-caste :—

Naipūrā	Chauk'har
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And a number of inferior genera, each consisting of one species only : these are the

Samdariyā	Kauhalī
Tirgonait	K'hajunnī
B'haurhā	Misirmau
Kabisā	Paihtiyā
Keotī	Masonr
Chandrautā	Bijarā
Kusumb'hiyā	Ausnaurā, &c. &c.
Bisohiyā	

A Pandé (masc.) cannot marry a Pandin (fem.), nor in general can any brahman intermarry with a brahmanī of his own *genus*; and the undermentioned six classes of brahmans are restricted in their matrimonial alliances to each other's families :—

1st. Kanauj kā Misir including Henikar Parsū and Gopnāt'h	2dly. Murādābād kā Misir, including Mājgānw Ankin and Sothiānw
3dly. Bājpeī Nak'hlau kā	6thly. Shukul Bālā
4thly. Pāndé Gégāson kā	Ch'hange and Awas-
5thly. Pāndé K'hor kā	t'hī; and
	Teorāsī Parbhākar ka.

Among these families no marriage can take place, without an expenditure of 700 rupees; of which 100 are laid out in gold and silver ornaments for the bride; fifty for culinary vessels; fifty for the bride's

to be given to the boy, who is to be married, by the head of his bride's family ; 101 presented by the same person to the boy's father, at the termination of the latter's visit of four days ; at the marriage, 150 rupees are distributed to the relations of the boy, who accompany him, four rupees to each person ; and the remainder is expended in bread, g'hī, dāl, sugar, &c. to supply a feast which continues five days. No other class of persons is *obliged* to incur such an expense in getting a daughter married ; but the sums disbursed by both brahmans, and Rājputs, are proportioned to their means : thus Kesrī Sing'h of Banthar, whose assessment is 150,000 rupees, paid with his daughter 42,000 rupees, besides an elephant, six horses from the Hardwār fair, which cost from 500 to 1,000 rupees each, and other valuable property ; and all classes expend much money on marriages, thus frequently involving themselves in debt, for two or three years.

When a Rājput, whose caste is as four *pasérīs*, marries his daughter into a family, whose caste is as a *mān*, he may be required to pay 1,000 or 2,000 rupees in consideration of the superior weight of the bridegroom's family. A proposal of marriage always comes from the girl's father, never from the boy's ; and in strict observance of the rules of caste, in liberality, purity, and delicacy, the people of Bainswārā claim pre-eminence over all other hindūs !

The ch'hatrī caste, including Rājputs, &c. is like that of the brahmans divided into numerous tribes, which, however, differ in name only, and all intermarry without restriction of family. The country between the Sagar and the Ganges is divided into

by a ch'hatrī tribe called Bachgotīs, descended from the Chauhāns of Mainpūrī, and were succeeded in its possession by the present predominant tribe, the Rāj-kumārs, from whom the Rajwārs of Partābgarh are an offset, 400 families directly descended from the original Chauhāns, and calling themselves by that name, inhabit the town of Mainmaj'hwār, which is about ten miles N. of Sultānpūr : 565 families of them live at Kusmhāon, fifteen miles N. of Sultānpūr, and smaller numbers of them are distributed among the neighbouring villages : their character is generally held in high estimation. Another ch'hatrī tribe, the Chandaurīā, is noted for the beauty of their females, and reside chiefly at Chandaur, just below Pāndépūr on the Gumtī, and in the surrounding villages. The remaining ch'hatrī tribes of the Oud'h reserved dominions are the

Bains

B'hālē Sultān

Kān'hpūrīā

Band'halgotī

Durgbans

Rāt'hūr

Hārā

Rānā

Bad'horīā

Sangér

Kachwā

Sūrjbans

Sombansī

Chandarbars

Garbansī

Kalhans

Sarnèt

Ujjain

Kaunsik

Bisèn

Monas

Dicait

Gautam

Panwār

Sulank'hī

Janwār

Banāpdar

Bag'hèl.

In the British district of Azīmgar'h there are found in addition to many of these, the undermentioned ch'hatrī tribes :—

Palwār
Barwār

Rautār and
Banwār;

and, in the Gorak'hpūr district, the Karchaliā tribe.

The whole of these tribes intermarry with each other, and the distinctions between them are nominal only. Many of them are dispersed through the Jaunpūr, and Allāhābād districts.

Wealthy zamīndārs are in the habit of making small gifts of rent-free land to brahmans, sufficient to ensure them the necessaries of life, which cost them little, as they are restricted by the rules of their caste from the use of animal food, except fish, which most of them eat until they are ten, a few until they are twenty years of age, and a still smaller number during the whole of their lives. It has already been stated that brahman zamīndārs do not cultivate the ground with their own hands, but employ field-labourers. They are usually found to be kind and indulgent masters, and ready to assist their dependants with small pecuniary advances, particularly at the celebration of marriages. The expense incurred on such occasions sometimes does not exceed ten or twenty rupees, and is bestowed on feasting, the purchase of clothes and ornaments, and presents to the bridegroom's father, and to the officiating pandit, who conducts the ceremonial of the marriage, and receives one or two rupees from the poorer, and ten rupees from the wealthier classes. Of

these pandits one or two are to be found in every village. It is part of the pandit's duty to accompany the barat or marriage procession. This consists of the bridegroom's friends and a set of dancing women, and, on the third day of the ceremony, accompanies the bridegroom to the bride's house, where the party remains three days. The bridegroom is carried in a pālkī, made and sold for five or seven rupees, at every place, where there is a good carpenter, but which is by the poorer classes generally borrowed for the occasion from some brahman or ch'hatrī. The whole ceremony, or rather rejoicing, (shādī) occupies seven or eight days, and the expense is equally divided between the fathers of the bride and bridegroom. The poorest zamīndār spends not less than a hundred rupees on such an occasion, and the wealthier classes sometimes as much as twenty thousand rupees. The ceremony is performed when the parties chiefly concerned are about thirteen years of age, sometimes later, and never until they are past the age of nine. Cohabitation commences at fourteen, and there is then a repetition of the same merry-making, but at half the expense. As all the relatives of the families attend on both occasions, the concourse of people frequently attracts a number of petty traffickers, who form a sort of mēlā.

SECTION 3.—AMUSEMENTS.

In the western and less misgoverned districts of Oud'h, every night in Phāgun (February—March), the holy month of the hindūs, is occupied by a continued series of nāches, (dances), performed in every town and

the zamīndār assigns small portions of land in consideration of their performing this service, (which during the last five days of the month continues night and day), on the platform (chabūtra) attached to his house : it is lighted up with lamps, (chirāgh) and torches (mashāl), and occupied by 300 or 400 spectators at a time, if situated in one of the larger towns. The dancing is viewed from a concealed spot by the females of the family, each of whom sends the dancers ten or twenty rupees, when the season terminates. The dances are accompanied by kalāmats, and b'hānrs (musicians), who also have lands assigned to them, and who play on the sitār, sārangi, mirdang, d'hol, k'han-jarī, manjīrā, and nafīrī. This is the practice even in the moral districts of Bainswārā, and Salon, where prostitution is unknown, except in the larger towns of the former, such as Rā'é Baréli, Ranjīt-pūruā, Dālāmau, and Harhā, and in the mūsalmān towns and villages of Salon, where exclusively the kasbīs have their permanent abodes, their society being attended with loss of caste to the hindū rural population. The children of the kasbīs are, if females, brought up to the employment of their mothers ; and, if males, they become musicians or cultivators of the soil.

The hindū mummary of the Rām Līlā, with its gigantic and grotesque figures filled with fireworks, and its masquers, is celebrated in many different parts of the country, during the month of Ko'ār (September—October), and daily attracts spectators to the number of 50,000 and upwards, who return to their homes at night. It lasts ten days, during which charity is dis-

Under the head "Newardīpūr" in Chap. XI., some notice has been taken of the b'hāts of Oud'h. Those, who visit Bainswārā proper, all come from Asanī, a town of 5,000 inhabitants, situated on the right bank of the Ganges, east of Fattehpūr, in the British territory, where they hold rent-free lands guaranteed by an imperial grant engraved on a copper plate. When they visit Oud'h, they are well rewarded with money, elephants, horses, and rent-free lands, the management of which last species of property they make over to some trustworthy neighbouring zamīndār.

In every town and village, there is an annual athletic display called the Gurūī. It is held on the fifth day of P'hāgun, (about the middle of February), and lasts from four in the afternoon till dark. The exercises are wrestling, single-stick, and sword-playing; and it speaks highly for the good humour and temper of the combatants, that quarrels never, and accidents rarely occur. The oldest men engage in the exercises at the festival; and throughout the year, when the work of the day is done, they employ themselves in instructing the young men of the village, and preparing them for the next Gurūī. This amusement is sometimes allowed to the sipāhīs in British cantonments; but I have seen it interdicted, in consequence of an awkward cut inflicted by a raw recruit. After their morning ablutions, and when not on duty, the sipāhīs always use the mugdās, —short heavy clubs for exercising the muscles of the fore-arm, arm and shoulder. Some of them use the léjam,—a heavy iron bow, having, instead of bow-string, a clumsy iron chain, to which several miniature

ous clatter, when the bow is alternately bent and relaxed, being, (without an arrow), successively pointed in every possible direction by the athlete. The *lējā*m weighs four *pasērīs*, and costs two or two and half rupees,* or three for a heavier one; but the *lējā*m and archery are practised more in the west of India, and the art of throwing the spear in *Bundélk'h*and, than in *Oud'h*.

In the eastern districts, where no man can stir abroad without his weapon, no amusements are ventured upon by the villagers, while there is any fear of open hostility from, or sudden surprise by their enemies. But at other times they indulge in the common amusements, and exercises called *kushtī*, *chāpkīdānd*, *gaṭkāp'hārī*, *bank*, *bichhuā*, &c. and sword-playing.

SECTION 4.—MERCENARIES.

It is well known that *Oud'h* is the great nursery for the armies of British India, and that it derives much of its revenues from the savings of the *sipāhīs*, who frequently spend only two rupees a month on their personal wants, and remit the remaining five rupees to their families. The *Haidarābād*, *Nāgpūr*, *Go'āliyār*, and *Lahaur* services also derive many recruits from *Oud'h*. Commercial enterprise, as has already been observed, finds more votaries among the acute and industrious *Bainswārīs*; while the *Salonīs* prefer military service, and especially since 1824 when a large augmentation of the Company's army took place, enlist in great numbers, and thus relieve the country

The country south of Faizābād, also, has of late years supplied many recruits ; the young men now finding agriculture a precarious means of subsistence. This drain on the flower of the population is sensibly felt, there being in many parts of Oud'h, particularly between Sultānpūr and the capital, not ten matchlocks, where formerly three hundred could be mustered. In the most southerly chaklās, however, of Salon, Partābgarh and Ahlādganj, the population and number of villages are increasing rapidly.

SECTION 5.—SLAVERY.

It may here be noticed that slavery is unknown in Oud'h, with the exception of the instance of fifty or sixty Sīdīs (Africans) possessed by the king, and of an equal number of them, who are the property of the minister : they are ghulāms, and receive no pay.

SECTION 6.—HONOUR.

As in some degree illustrative of the scope occasionally given to this principle, I may here mention an occurrence, which took place under my own observation.

Bandhū'ā-Hasnpūr, a village five miles west from the cantonment of Sultānpūr, is the residence of a grāndee named Husain Ālī, surnamed the Khanzāda, and styled raja, though a Muhammadan. He is indeed by the surrounding population considered the greatest of all rājas, and supposed to possess the power of invest-

by touching their heads with a ring, which he wears on the left great toe. He is the descendant of the ancient rājas of Banaud'hā, (an obsolete territorial division, extending from the Guntī near Isaulī to the G'hāgrā,) the last of whom gave his daughter in marriage to Gaurī Bādshāh, the mūsalmān invader of Oud'h, (probably Kutb-ud-Dīn Ghaurī, who subdued Oud'h about A. D. 1205), and himself ate with the Bādshāh, and thus became a mūsalmān, but retained the hindū title of rāja, which he has transmitted to his descendants.

Husain Alī was, in 1836, when the circumstance referred to occurred, about twenty-five years of age, and is an extensive zamīndār, holding much of the land, which lies between his residence and Jagdīspūr. It being known, that his mother, who resided at Bandhū'ā, a fort lying about a mile south from his residence, Hasnpūr, cohabited with a neighbouring zamīndār named Sher Alī, and the father of her son-in-law, Husain Alī resolved to put her to death, and one night attempted to execute his intention by setting fire to her residence, which he had surrounded with his armed followers. In the smoke and confusion she escaped, almost naked, with her daughter and another female relative, through an unguarded breach in the wall of the fort, and fled on foot to the cantonment of Sultānpūr, as the nearest place of safety. "Neutrality in all private quarrels being deemed essential to the security of the British cantonments in Oud'h, she was at first refused admission within the boundary pillars, but was ultimately smuggled into the regimental bāzār, whence she was on the point of being ejected, and would have been murdered by her son, had not Sher Alī opportunely come up with 300 matchlockmen, and carried her off.

Husain Alī subsequently made another attempt on her life, and got near enough to hack her pātkī with his sword; but she again escaped, and is now in a fort near Sikraurā with Sher Alī, who abandoned his kôṭ (small fort) Jaisingpūr, twelve miles N. E. of Sultānpūr, with his villages, to Husain Alī, who was expected to take possession of them, at the expiration of the financial year, (20th June, 1837.)

SECTION 7.—EMIGRATION.

Having made frequent enquiries regarding the obstacles to emigration, I was always answered that the people are perfectly aware of the easy terms, on which they could obtain the use of land from the European grantees in the Gorak'hpūr district, but that a general idea, at one time not groundless, prevailed, that the newly reclaimed country was unhealthy. The low-caste tribes frequently remove thirty or forty miles beyond the Oud'h frontier; but all classes, especially the higher, object to emigration, on account of the difficulty, which it occasions in keeping up their connexion and forming marriages with their compatriots, —all beyond Oud'h being regarded as “a foreign country.”

SECTION 8.—DWELLINGS.

The dwelling houses of Bainswārā are generally built of unburnt bricks, or of layers of clay three feet in breadth, and one in height, each layer being allowed to dry before the next is laid on. The roofs are fre-

and covered above with planks placed crossways, over which are laid mats and a covering of wet clay, well rammed down, and a foot and a half in thickness. The walls are carried up to six or seven feet above the upper surface of the roof, to afford a concealed place of recreation for the females of the family. During the rains, there is a slight bamboo and grass roof placed on the tops of the walls only, to prevent the rain from insinuating itself, at the angle between the roof and wall, and thus causing a leak. These roofs never crack in dry weather, nor leak during rain, and may last 100 years, never being attacked by white ants or other insects. Around houses of this description, which are sometimes built of such an extent as to cost 3,000 rupees, there are verandahs covered with pent roofs of tiles or of grass. For out-houses, pent roofs of tiles or grass are used. The beams are left uncovered with any ceiling on their under surfaces. The floors are of earth well beaten down, and nicely smoothed, and are bare, with the exception of a few mats laid down, on each of which two or three people can sit : but during the presence of visitors, they are covered with a shatranjī, (stout cotton carpet), or with a white cloth : on great occasions, several of these are borrowed from neighbours. The furniture consists of charpā'es, (dwarf bedsteads), brass vessels, arms, and agricultural implements.

In front of almost every house, there is a chabūtra, (a raised platform made of earth), which has a tiled or thatched roof supported by posts or by earthen pillars, and the floor of which, on the occasion of nāches or other assemblages, is covered with mats.

All the Indian houses, on each side of the principal door

of their houses, a wooden divan, about twelve feet long, three feet broad, and twenty inches high, capable of accommodating about ten men, where the people assemble in the evenings to have a chat, for an hour or so.

The houses of the poorest classes have earthen walls, thatched roofs, and hurdles instead of doors.

The finest house, that has recently been built out of Lak'hnau, is the residence of Bakhtāwar Singh, and Darshan Sing'h at Sahganj (q. v. in Chapter XI.)

SECTION 9.—FUEL.

Where jangal is abundant, wood is generally used for fuel ; but cow-dung makes an excellent substitute in other situations, giving out a strong steady heat : it is collected, dried and stored in the dry weather, as a provision against the rains.

SECTION 10.—CLEANLINESS.

This object is generally attended to, by the town and village population of Oud'h ; who, however, impute a neglect of it to the inhabitants of cities. Throughout Bainswārā, the towns are kept clean by the exclusion of the lower castes,—the chamār, (currier), korī, (weaver), pāsī, (spirit dealer), halalkhor, (sweeper), kunbī or kunwī, (ahīr or go'ālā, the cowherds), who, except the ahīrs, are very slovenly in their habits, and who are therefore compelled to live by themselves, a

and other cutaneous disorders, but not otherwise incommoded by their dirty habits, which the better classes are aware would speedily cause disease among *them*.

SECTION 11.—MENDICITY.

There is in Bainswārā no public or permanent provision for the relief of the poor : but all persons, who have the means, are in the regular habit of almsgiving, either in money or in grain ; and, on particular occasions, at *tīrat'hs* (religious pilgrimages) especially, individuals give largesses sometimes amounting to 100,000 rupees. Within the last sixteen years, since the country has become impoverished by the deficiency of the harvests, there has been a great increase in the number of itinerant beggars, 100 being now found in a town of 5,000 inhabitants, where formerly only one or two could be seen. About fifty years ago, there was a famine, during which wheat was sold at five sers for a rupee, and some hundreds of thousands of people died ; but since then, if we except the dearth of 1837, the death of individuals from actual want of food is a thing unheard of. * In Salon also, there are but one or two *fakīrs* to be seen in each large town, and very few common beggars. Under the head “Salon” in Chap. XI. will be found an account of the eleemosynary institution established in that town. There is another institution of the same kind at B'haddarsā in Pachhamrāt, endowed by Asaf-ud-Daulā with lands yielding 15,000 rupees annually, which sum is distributed indiscriminately among *fakīrs*, and *bairāgīs*,

well as common beggars, are rather numerous in the vicinity of Faizābād : a saīyad is charged with the care of the establishment. There is one, at Band'hu'ā, endowed by the Hasnpūr rāja with an income of 8,000 rupees, and in the city of Awad'h, a large establishment called Hanumāngarhī, which has a revenue of about 50,000 rupees. It was instituted by Shujā-ud-Daulā, and has continued in a flourishing condition up to the present time, unmolested by chaklédār or zamīndār. The building is about a mile from the river, and is kept in excellent repair. No mūsalmān is permitted to enter its walls, and the revenues are absorbed by about 500 resident and itinerant bairāgīs, and hindū mendicants of all descriptions. The bairāgīs, under the authority of their mālik or abbot, Jānkī Parshād, manage the estates themselves, levying a moderate rent, of one or two rupees per big'hā, which has never been augmented. The city of Awad'h contains also the similar establishments here named :—Sugrimkilla endowed with only 100 big'hās, but accommodating 100 resident bairāgīs, who frequently marry, while the itinerant bairāgīs, (sometimes, but improperly called fakīrs) do not marry :—Rām Parshād kā k'hārā, occupied by 200 or 250 bairāgīs,—revenue about 25,000 rupees :—Bidiyā kund occupied by 200 bairāgīs, and having a revenue of 10,000 rupees. There are a few more establishments of the same kind spread through the country, and much charity is distributed by the brahmans out of the small allotments of land granted to them, for this purpose, by the zamīndārs. Many wounded and disabled persons are seen ; but these are generally ch'hatrīs, and are maintained by their own

the roads : the poor, who are attacked by ophthalmia, are not attended to by the baid̄s or hak̄ims, and blindness often follows the disease.

CHAPTER XIII.—RELIGION, EDUCATION, LITERATURE, SCIENCE AND ART.

After six centuries of subjection to Muhammadan rule, the great bulk of the population of Oud'h adhere to the hindū religion. The proselytising zeal of the Muslims has indeed long since passed away ; and they have, like the Christian church in Italy, finished by intermingling with many innate corruptions of their peculiar creed, not a few of the superstitions of their Pagan subjects ; who seem not unwilling, in return, to adopt some of the religious observances of their victors, particularly such as minister to their love of sight-seeing, and holiday-making. The far-famed Maulavī, whose followers adopted his title for that of their sect, and who excited a petty religious war in Bengal, endeavoured when at Lak'hnaū, in 1832, to effect a reform in the externals, and a revival of the ancient spirit, of the religion of the prophet : but the disturbances occasioned by his preaching induced the darbār to silence him. In the course of the succeeding year, he sent missionaries into Salon to effect the same purposes among the numerous Muhammadan population of that district : but the zamīndārs dismissed them, requesting them to inform the Maulavī, that it was

their intention to follow the example of their fathers before them, in carrying *tāzīas* (tinsel shrines) at the muharram, and in relieving and aiding the poor, the lame and the blind ; and the Miyān of Salon sent him a message to the same purport. The religious excitability, therefore, of the Muslims of Oud'h seems to range lower, than that of their co-religionists in Rohilk'hand, in the Haidarābād states, or even in Bengal.

The education of the rising Hindū generation is almost exclusively in the hands of the pandits, (learned brahmans), who are generally maintained by the gift of rent-free lands, rarely exceeding 100 rupees in annual value, from the zamīndārs, and who therefore not only make no charge for educating their pupils, but sometimes clothe, and feed them, at their own expense. When a *kāyat'h* (writer) is employed as an assistant, he receives four anas a month for each boy ; or if the number of pupils exceed 100, the parents insist on the charge being reduced to two anas. Should the zamīndār, (as at Pālī), not have regularly endowed the *d'harmsālā* (school), and have occasion to send three or four of his boys to it, he generally rewards the pandit with a *big'lā* of rent-free land for his trouble ; and the pandit makes a charge of from four to eight ānas, for the education of each of his other pupils, chiefly the children of brahmans, to whom he teaches Sanscrit. In the Pālī zamīndārī, there seems to be but one school, which is situated in the town of that name, the zamīndār's place of residence : but several brahmans make a practice of giving a private education, *gratis*, to the children of other brahmans, who are themselves incapable of performing that duty.

Throughout Bainswārā, there are schools in all towns, of 400 or 500 houses, there being generally twenty or thirty brahman families in such towns. The children go to school at sunrise, are allowed leave from eleven to one o'clock, and return home at sunset. They commence their education at the age of seven, and learn to write, and read, at the same time. Kāyat'hī is the first character which they learn ; and Persian is taught in the cities only, not in the towns, very few brahmans being acquainted with it. The boys write, for six or twelve months, on the smoothed ground, with a kaurī (shell) held in the hand, till they acquire some knowledge of book-keeping, and accounts ; then for two or three months with chalk, on boards painted black, red or yellow ; then for six months on the same boards, but with a large reed, and with a white ink composed of chalk suspended in water ; and, lastly, on paper, with a common reed and ink.

In the chaklās of Salon, Partābgar'h, and Ahlādganj, every town, where there is a pandit, has a school attended by from 50 to 100 boys, according to the size of the town ; and the zamīndār similarly proportions the pandit's allotment, which varies from 10 to 100 big'hās. If a kāyat'h is employed in addition to the pandit, the boys pay the former two ānas a month : but the pandit receives nothing from them, and will even lodge and maintain a boy sent from a neighbouring town, where there is no pandit.

In the eastern districts, the schools are similarly taught by pandits, who are paid in land, and by kāyat'hs, who charge four ānas a month for each boy.

The pupils begin their education at ten or twelve years of age, and remain at school as long as ten, twelve or fifteen years : after which, if they are to become pandits, they are sent to Banāras to finish their education.

No English is taught in any of these schools : but there is reason to believe, that many wealthy zamīndārs, and rājas would be glad to see their boys have the benefit of an European education, if they could obtain the services of qualified teachers.

The language spoken in Oud'h is Hindūstānī, generally containing fewer Hindī words, than the dialects of the eastern ceded districts : but in the central chaklā of Salon, a larger admixture of Hindī is perceptible, than in the Bainswārā dialect, which resembles, in its abundance of Persian and Arabic vocables, that spoken at Lak'hnaū.

There is no original or local literature in Oud'h, even in the more civilized district of Bainswārā, except a sort of genealogical annals of that chaklā, called Bansaorī kā Pustak, which is written in Sanscrit, and read by brahmans only. They are the only possessors of libraries, which are limited to such books as the Mahāb'hārat, Harbans, Purān, Kāb, Manormā, B'hāgwat, Byākaran, Kaumudī, Sārassul, D'haramshāstar, Nyāishāstar, Dasam, and Prem Sāgar.

Of science the people of Southern Oud'h are wholly devoid, except a few medical works in the possession of the baidas : and for Art there is little or no demand

ment of mosques, and shiwālas, (Muhammadan, and Hindū temples), which, however beautiful in many of their outlines and details, are all mechanically wrought, after a certain number of patterns, variously combined, which have been handed down from generation to generation. All sculpture must be executed by artists from Lak'hnaū, Mīrzāpūr, or Banāras, the material employed being chiefly the grey, or hard and tenacious greenish, sandstone, brought from Chunār and Mīrzāpūr :—the latter is quarried in the dry season from the beds of torrents, and bears a very high and detached relief, without much risk of fracture.

CHAPTER XIV.—DISEASES AND MEDICAL AND SURGICAL PRACTICE.

In point of salubrity, the southern districts of Oud'h appear to be the most highly favoured region of the Gangetic plain ; although they are subject to such universal epidemics, and contagions, as influenza, cholera, (called hulkā in the villages, and hardly known before 1817,) and small-pox with its common predecessor measles ; and although intermittent fevers with their sequelæ of dropsy, and colliquative diarrhœa occur, during the least healthy months in particular, that is, in August, September and October, instances of longevity, which in most countries would be thought remarkable, are found every where ; and

a hundred years. The mortality among infants also is very small, except that occasioned by small-pox ; although all their diseases are left to run their natural course, medicines not being given to young children, but to their wet-nurses. Maimed and blind persons are seen in every village : but these casualties are to be attributed to the wretched mal-administration of the country, and to small-pox and neglected ophthalmia. Variolous inoculation is not practised in Oud'h ; and its inhabitants require much persuasion to avail themselves of the benefits of vaccination. Viewed in connexion with the frequent occurrence, in recent times, of small-pox after vaccination, it is an interesting fact that, within the last fifteen years, the recurrence of small-pox, two or three times in the same individual, has been observed in different parts of Oud'h, as a circumstance before unheard of ;—old men having the disease and dying of it, while people formerly had it only once, and that almost always before puberty. Persons suffering from this disease are avoided : they do not sleep on a bed-stead (*chārpāī*), wear shoes, or have their beards shaven : they are kept cool, but are not allowed cold water, either for ablution or for drink.

The most unhealthy locality in Oud'h, as has already been observed, (see page 15,) is the vicinity of a deserted bend of the Ganges near *Mānikpūr*. The country lying north-eastward of the *Dé'ohā* is also noted for its insalubrity, being low, and, from its vicinity to the hills, abounding in springs, and permanent shallow pools, and water-courses, which are highly charged with decomposed vegetable matter : its inhabitants suffer much from intermittent fever, succeeded by enlargements of the spleen, and other diseases.

nitic and dropsical swellings, and from goitre and scrotal diseases; and they attribute these ailments to their drinking the waters of the natural ponds and rivulets, supposing them to be filled with poisonous leaves, and believing that the exclusive use of rain water out of artificial tanks, whether kachā or pakkā, or even of well-water, would secure exemption from disease. They are not aware, that the decaying leaves of *any* plant communicate noxious properties to water, but attribute the mischief to the leaves of the mukuā, karaund, kar hārī, māhur, and the dūd'hiyā (a generic name there specifically applied to a lactiferous creeper, which, during the rains, is found on the bamboo and other trees, and from which the natives believe, that snakes obtain their poison). Goitre is particularly common on the banks of the Manurāma, the river which passes the city of Bahrāich, and on those of the Térhī, (noted for their superior breed of country horses,) which runs parallel to, and between the Manurāma and Dé'ohā. The chief remedies employed in cases of fever are preparations of the rājgūjar, pārhi, chīt, and karaiyā plants, bruised with black pepper.

The country south-west of the Dé'ohā being high and dry, and its waters free from the noxious minerals, which, though in evanescent quantities, may be supposed to impregnate those derived from the Hills, its inhabitants are not subject to goitre or to the scrotal enlargements, which are so frequent among the inhabitants of the country lying north-east of the river: but those who live in the neighbourhood of that part of the Tons (see page 13), which, for the purposes of irriga-

are subject to all the other diseases just mentioned, particularly during the months of September, and October. The injurious effects arising from this interruption of the free course of the stream are by the natives, attributed to the mud of the embankment, and to the supposed poisonous plants above enumerated: but the effect is more probably attributable to the quantities of leaves and decayed shrubs, which fall into the stagnant water.*

Bainswārā, like other parts of the country, has, during the three unhealthy months, its share of intermittent fevers, generally tertian, though sometimes quotidian, which are occasionally, as in 1827, so prevalent as to affect simultaneously almost the whole population of a town, and prove fatal in ten or fifteen cases out of 100, through cerebral congestion, which is allowed to go on for weeks, or through destruction of the chylopoietic apparatus, and consequent diarrhoea, which carries off the sufferer in three or four days: enlargements of the spleen are very uncommon. These fevers are most prevalent around spots, where water long stagnant has just dried up: but this fact does not attract the observation of the natives.

* It is remarkable, that for many years the practice of damming up, annually at the end of the rains, the Barnā nālā, which runs through the civil station of Banāras, has been successfully resorted to for the purpose of averting the increase of disease which was formerly occasioned by the running off and evaporation of its water: and while witnessing the great prevalence of intermittent fever at Chunār, during the cold season of 1837-8, apparently occasioned by the miasm arising from the muddy bed of the torrent, called the Jargū, which, with the Ganges, peninsulates the town and fortress: it struck me that a similar benefit would arise there from the formation, just below the cantonment and across the nālā, of a permanent barrier of large masses of stone, over which

Bainṣwārā appears to enjoy an exemption from the various kinds of elephantiasis Græcorum, (commonly, but improperly called leprosy) which abound in other parts of Oud'h, and indeed throughout the Gangetic plain, especially its eastern portion. The people know it by observation only, but correctly divide it into two species, the non-tubercular (sunbahrī or sunbaihrī), and the tubercular (korh or juṣām). The former species is characterized by an insensibility, and sometimes by a glossiness and slight discoloration of the skin, a thickening and chapping of the palms and soles, (which in some rare instances assume a honey-combed appearance), and an absorption of the outer layers of the cuticle between the toes, with occasional ulceration of the toes. They do not consider sunbahrī as hereditary, contagious or incurable. Korh is, in its acute form, a febrile and inflammatory disease, affecting the face, ears, hands and feet with a general swelling, which, if not treated by local and general blood-letting, leaves, on its subsidence, a number of permanent nodules on the alæ of the nose, on the external ears, and on the extreme phalanges of the fingers and toes, with a general tubercular thickening of the skin of the face, and of the mucous membranes of the air-passages, indicated by a hollow roughness of the voice. Both diseases are occasionally combined in the same individual. Kor'h is regarded with peculiar horror, as an effect of the Divine displeasure, and as a contagious disease, which becomes hereditary, or, as the natives expressively say, "establishes its throne in a family." This disease is more specially denominated pakkā kor'h, to distinguish it from another, which is viewed

therefore, though with doubtful propriety, reckoned as a sub-species of kor'h. It is properly called jīt baran, and consists in a chalky whitening of the skin of the whole body, either generally or in patches, and without tubercles or ulceration. The hindū Bainswārīs shun persons suffering from either pakkā kor'h, or jīt baran; but the mūsalmāns, being fatalists and non-contagionists, associate, eat, drink and smoke with them. In the districts where these diseases occur, the sufferers are ex-communicated by their own families, if hindūs, and are obliged to live in separate huts, with separate cooking and drinking vessels, and in a state of celibacy. The Bainswārīs, though exempt from them, are liable to scrofula (gandmāla), which they know to be hereditary, and non-contagious, and which, like kor'h, is ascribed to the wrath of Heaven. Itch occurs among the dirty low-caste tribes only (see page 161.) Gonorrhœa and syphilis are, in the hindū towns and villages, known by name only. A very few cases of kor'h are seen in the districts of Salon, and Partābgar'h, and the persons suffering from the disease are excluded from society; but sunbahrī is unknown, and before 1824 there had been very few instances of cholera, the importation of which is, by the inhabitants, ascribed to the freer communication, which then took place with the Company's provinces, in consequence of the numerous enlistments of young men for the army. In the eastern chaklās of Oud'h, kor'h is a more common disease; there being, in almost every town containing 4,000 inhabitants, not fewer than ten or twenty kor'hīs. The subjects of it are excluded from the towns, and made to live apart; and they frequently lose their

Phthisis (ch'hai) also occurs in those districts, and is thought contagious and incurable. Sunbahrī, or sun, is of not infrequent occurrence, and is known to be non-contagious, but is believed to be hereditary.

Medical practice, like education, is in the hands of the pandits, who, when exercising this vocation, are called baidas, and who are pretty numerous, one or two being found in every town of 1,000 inhabitants, and from ten to twenty in a town of 5,000 inhabitants. The means of their patients being small, their legitimate income ranges between ten and fifty rupees a month; but they are, moreover, in league with the pasārīs, and share their profits upon the drugs employed, when the patients purchase them in a crude state; and when the medicines have to undergo any manipulation, they are prepared by the baidas themselves. The table of materia medica, in Chapter V., will afford some idea of their therapeutic means and practice. Their treatment of fever is,—privation of food for ten or fourteen days, followed first by potations of warm water, and when the fever abates, by rice water, and cheretta. There is in Bainswārā one baid of considerable eminence, named Kanhaiyā Lāl, a resident of Suméerpūr, fifteen miles east of Badarkā,—and now about sixty years of age. He is much employed by the rājās, and other wealthy zamīndārs of the country, and has five times made professional tours, as far as Jod'hpūr, Machènrī, &c. in Rājwārā. The Rēnwā rāja pays him 1,000 rupees a year, and obtains the benefit of a visit from him, once in two or three years. He practises surgery also, (amputations, &c.) and has an hospital at his door, with accommodation for five or

income is from 3,000 to 4,000 rupees, and he keeps an elephant, and pālkī, for his conveyance.

In Salōn and Partābgar'h, baidas are found at every six or eight miles, and are brahmans of different denominations. They keep secret the names, and ingredients of their nostrums, but often give their advice and medicines gratuitously, and are held in great respect. They very frequently are supported by grants of land from the rājas and other zamīndārs, to the extent of from twenty to 400 big'hās, but decline the acceptance of more, as this is sufficient for all their wants. Jarrāhs, or mūsalmān surgeons, are numerous, have abundance of practice in gun-shot, cannon-shot and sabre-wounds, and are well paid. When a man is wounded in a limb, the whole of it, instead of the principal artery, is tightly compressed to stop the effusion of blood, until a jarrāh can be procured to amputate the limb, take up the arteries, extract a ball, or apply the actual cautery, as may be thought necessary. In extracting bullets, they enlarge the wound when it is thought expedient or safe to do so: otherwise they trust to a cataplasm. Their treatment of wounds and fractures is bad. They allow incised or contused wounds to remain too long dressed, and bandaged, without examination, and due cleansing, and thus protract the treatment to double the proper time; and they are suspected of extorting payment, by acrid applications to the wounds. Their splints are hard stiff pieces of bamboo strung in parallel lines, and absurdly short, and are applied so cruelly tight, as to cause swelling of the limb, and sometimes mortification. The Salōn jarrāhs do not resemble the

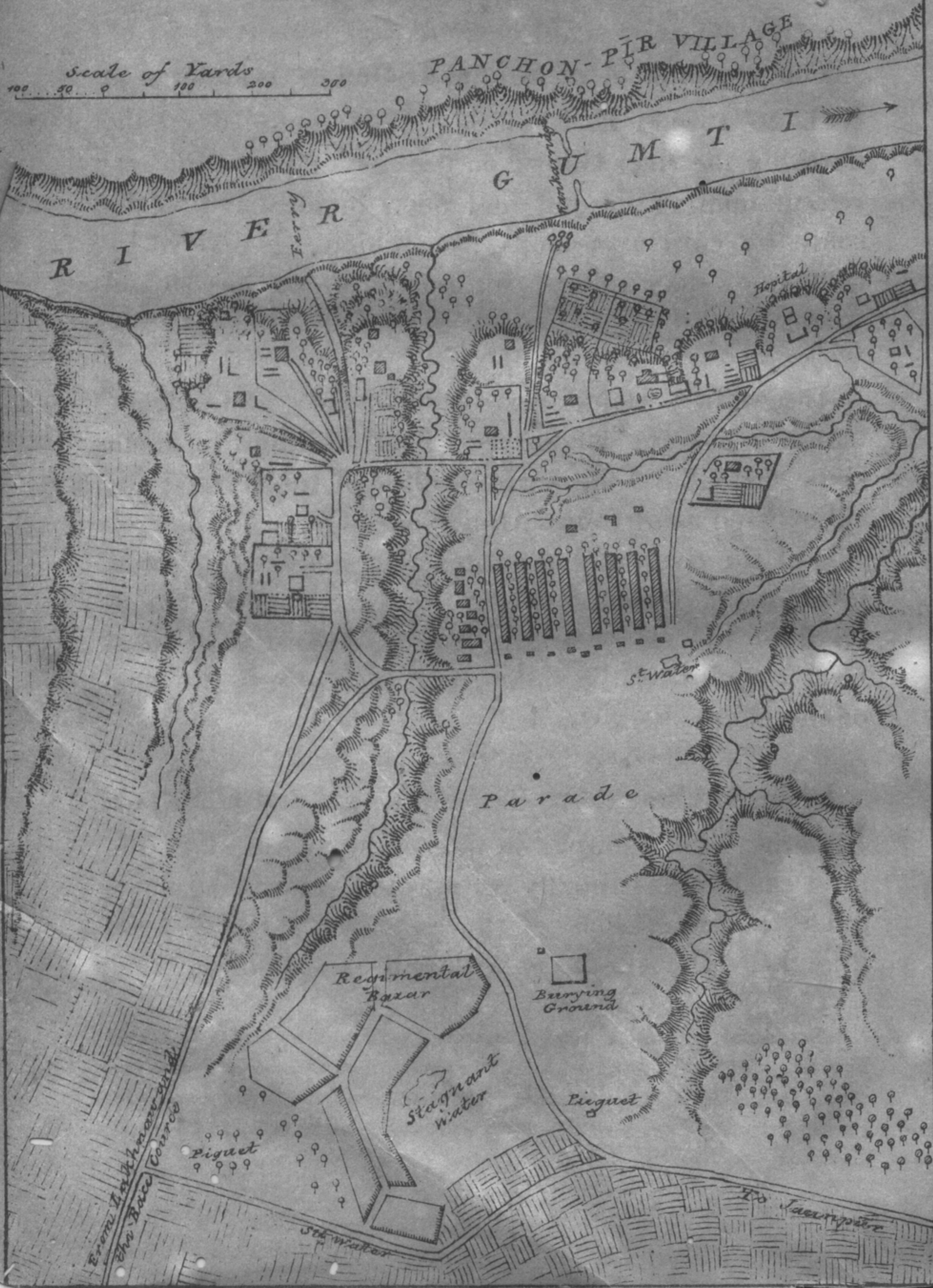
barber-surgeons of Europe, in combining the tonsorial art with their more serious and profitable business.

In the country lying between the Gumtī and Dé'ohā, the baids are brahmans of the Sānkaldīpī tribe, (to which the chaklédār Darshan Sing'h belongs.) They charge highly for their services, always requiring a rupee in advance before going to the patient's house, and sometimes requiring fifty or even a hundred rupees for a single day's attendance, and never less than five rupees : but they, as well as some mūsalmān hakīms, find employment even on these terms, there being perhaps only one practitioner to every ten or fifteen villages :—thus at the large town of Pālī, there is neither baïd nor hakīm ; and the wealthier classes, when requiring medical aid, are obliged to send to the distance of fifteen or twenty miles. Surgery is practised by barbers, who are found in every village, and who acquire their knowledge from their fathers. They extract bullets, and amputate, suppressing hemorrhage by ligatures on the arteries, and by the actual cautery ; and, in cases of comminuted compound fractures, pretend to replace the splintered bone with one taken from a goat recently killed.



THE CANTONMENT OF SULTĀNPŪR-AWADH

as occupied in 1837 by the
63^d Regiment N.I. and a Detachment of Artillery



CHAPTER XV.—THE CANTONMENT OF SULTANPUR OUD'H.

The cantonment of Sultānpūr Oud'h* is situated in N. L. $26^{\circ} 18'$ and E. L. $82^{\circ} 0'$. It is bounded on the north by the river Gūmtī, on the east and west by barren undulating ground and deep ravines, and on the south by cultivated lands, from which it is divided by a range of stone pillars, continued also, on the east and west sides.

The station, including its parade, lines, and officers' banglās, has the advantage of an elevation of about sixty feet above the narrow valley of the Gūmtī; the valley itself being from ten to a hundred feet wide, on each side of the river, and about ten feet above the lowest level of the stream, which usually rises from five to eight in the rainy season, but in August 1838 must have overflowed the valley, as it then rose to the level of the pathway on the bridge at Jaunpūr.

From Lak'hnaū on the northwest, and Ghāzīpūr, Banāras, and Jaunpūr on the southeast, the station is most easily accessible by water, the Gūmtī being navigable, at all seasons of the year, for boats of light draught. The roads connecting it with Jaunpūr, Illā-

* So named in contradistinction to the cavalry cantonment of Sultānpūr Banāras, with which, however, it is often confounded, to the great inconvenience of the residents at both stations. On this account, the former would with

hāhād, Kārē-Mānikpūr, Lak'hnaū, Faizābād, and Gorak'hpūr are in a wretched condition; the last mentioned, in particular, being barely practicable for wheeled vehicles.

The prevailing winds come from the west, and east. The former are generally of a parching dryness, cold in November, and February, with part of March and the months intervening, and increasing in temperature from March till June, when they resemble the blast of hot air from a furnace. The east winds alternate irregularly with the west, and are most prevalent during the rainy season, which includes July, August, September and generally parts of June and October: they are always more or less damp, and seldom very cold. During the cold weather, there are sometimes a few days of northerly wind, which is very dry and chilly. Southerly winds seldom occur, and are in general damp, and rather warm.

There are no mountainous ranges in the vicinity of the station. Four or five peaks of the Himalaya mountains, including the principal summit, D'haulāgīrī ("the White Mountain,") are visible from three to ten days almost every year, about the close of the rains, when there is not a particle of dust to obscure the air: they occupy about forty degrees of the northern horizon, and appear about twenty minutes in altitude:—their distance from Sultānpūr is 200 miles, in a direct line.

The river Gūmtī, on the right bank of which the cantonment stands, has its origin in the tarāī of Rohilk'hānd; and, after a course of 300 miles, or following

all its windings, more than 500, falls into the Ganges between Banāras and Ghāzīpūr. It is crossed by a handsome stone bridge at Jaunpūr, and at its embouchure by a bridge of boats, which is maintained there, from the middle of October till the middle of June. At Sultānpūr, the river is, in the dry season, 100 yards wide with a mean depth of four feet, and a current of two miles an hour,—and is there about 500 feet above the level of the sea. Its water, from November till July, is of a pellucid green colour : during the rainy season, it is loaded with yellowish mud. Its bed is composed of brilliant granitic sand from the primitive ranges of the Naipāl mountains. Opposite the centre of the station, the stream is crossed by a ridge of kankar, in which, however, is a deep chasm through which boats easily pass. When free from mud, and not too cold, the river forms an excellent swimming bath, and is thus used, by both officers, and sipāhīs.

The wells are from forty to seventy feet deep, are cut at a trifling expense through the firm kankar, and afford good water, notwithstanding the calcareous nature of the soil, and the abundant efflorescence of nitrate, carbonate, and sulphate of soda, which appears on its surface.

There are no marshes of any considerable extent near Sultānpūr cantonment, and none in its immediate vicinity.

The station possesses the inestimable advantage of an almost perfect natural drainage, occasioned by its elevation, and by its proximity to a running stream

which never overflows its *high* banks. The only exceptions to its freedom from stagnant water were a hollow about 350 square yards in surface, in front of the Quarter-Master-Sergeant's banglā, and two others of similar extent close to the regimental bāzār. They appear to have been formed many years ago, by the sipāhīs and occupants of the bāzār, when constructing their huts.

The climate of Sultānpūr is characterized by dryness, comparative coolness, and medically by uncommon salubrity as regards the more important classes of disease, with the exception, of course, of epidemic, and contagious affections. Its excessive dryness occasions, among native troops recently accustomed to a damper climate, frequent catarrhs, tooth-ach, ear-ach, parotitis, chapped hands and feet,* and occasionally acute rheumatism of a tractable character. But from all endemic diseases of an important nature the station is free; and although liable to the ordinary diseases of India, it may, on the whole be considered as one of the healthiest localities in the plains of Hindūstān. The inhabitants of the bāzār and village attached to the cantonment were decimated by the great cholera epidemic of 1837, after it had hovered round the imme-

* This chiefly was the form in which elephantiasis Græcorum, contracted in Bengal by many of the sipāhīs of the 63d N. I., shewed itself on their removal to this dry climate. Some of these men it was found necessary to invalid; and nearly the whole of the remainder were in a state of gradual recovery, under the use of madār, when bad health compelled me to give up temporarily the medical charge of the regiment. In the case of one female (the Quarter-Master-Serjeant's ayah) the disease concentrated itself in the pudenda, and very nearly carried her off by the induction of hectic fever, leucorrhœa and sympathetic pulmonary irritation, before I became aware of its nature. Excision of the tumours, which in all weighed five pounds, and the preparation of which is now in the museum of the Calcutta Medical College, speedily and perfectly restored her health: this disease is probably of as frequent occurrence among native females in Bengal, as the corresponding scrotal hypertrophy has of late been found in that province.

diate vicinity for nearly two months: its introduction within the boundary pillars by three travellers, who all died of it, caused a general persuasion of its being contagious:—the disease was of a peculiarly fatal character, and carried off two sipāhīs. Snakes are rather numerous, particularly the venomous cobra di capello and karait: no accidents happened to the sipāhīs from them; but every year two or three cases of snake-bite were brought to me from the neighbouring villages, and were successfully treated with brandy and laudanum, in the manner detailed in the second volume of the Transactions of the Medical Society of Calcutta. A few cases of bites from mad dogs also occurred, and were treated by careful ablution of the wound, and suppuration, with slight mercurialization kept up for two months,—a practice which I have never known to fail in averting hydrophobia. Many surgical cases are, as might be expected brought for treatment to the cantonment, from the surrounding lawless country. Subjoined are two tables shewing the nature and extent of disease prevalent among the regiment of which I had medical charge, during the three years, it was stationed at Sultānpūr: its average annual mortality for this period was only one in 288, or a little more than one-third per cent.

TABLE shewing the Strength of the 63d Regiment Native Infantry, while stationed in 1834-5-6 and 7, at Sultānpūr, Oud'h, and the proportions of Disease and Mortality in the Regiment during that period.

In the Cold Seasons of 1834-5, 1835-6, and 1836-7.			
December 1834, Strength,	372	Total admitted into Hospital, ...	357
January 1835, "	372	Ditto discharged from ditto,* ...	357
February " "	372	Ditto died,*	3
November " "	750		
December " "	751		
January 1836, "	749	Average monthly percentage } of admissions in Strength, }	5.02
February " "	745	Total percentage of Deaths in }	0.84
November " "	752	admissions,	
December " "	751		
January 1837, "	751		
February " "	748		
Total,	7114	* Including Men who had remained from the rainy season of 1834.	

In the Hot Seasons of 1835, 1836, and 1837.			
March 1835, Strength,.....	753	Total admitted into Hospital, ...	501
April " "	753	Ditto discharged from ditto,.....	495
May " "	747	Ditto died,	4
June " "	751		
March 1836, "	750		
April " "	704	Average monthly percentage } of admissions in Strength, }	5.74
May " "	740	Total percentage of Deaths in }	0.80
June " "	738	admissions,	
March 1837, "	724		
April " "	724		
May " "	677		
June " "	670		
Total,	8731		

In the Rainy Seasons of 1835, 1836, and 1837.			
July * 1835, Strength,..	649	Total admitted into Hospital, ...	540
August " "	650	Ditto discharged from ditto,.....	522
September " "	653	Ditto died,	1
October " "	751		
July 1836, "	667		
August " "	653	Average monthly percentage } of admissions in Strength, }	6.66
September " "	650	Total percentage of Deaths in }	0.18
October " "	750	admissions,	
July 1837, "	654		
August " "	665		
September " "	682		
October " "	680		
Total,	8104		

In the 35 months abovementioned.			
Average Strength,.....	688	Average monthly admissions, ...	40
Total admitted,	1398	Average annual Deaths,	2.39
Ditto discharged,	1374	Percentage of admissions in }	5.82
Ditto died,	8	Strength,	
		Ditto Deaths in admissions,	0.57
		Annual percentage of Deaths in }	0.347
		Strength,	
		being one in 288.	

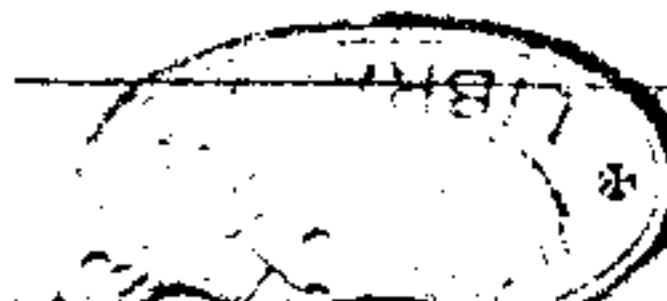


TABLE SHEWING THE NUMBER AND NATURE OF CASES ADMITTED INTO THE HOSPITAL OF THE 63^d REGIMENT N. I.
IN 1834-5-6-7, WHILE STATIONED AT SULTANPUR-ODD'H.

DISEASES.	Cold Seasons.									Hot Seasons.									Rainy Seasons.								
	1834-5.			1835-6.			1836-7.			1835.			1836.			1837.			1835.			1836.			1837.		
	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.	Admitted.	Discharged.	Died.
Apoplexy,	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Asthma,	1	1	0	2	2	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Cholera,	0	0	0	2	2	0	1	1	0	2	2	0	5	5	0	15	12	2	2	2	0	0	0	0	5	6	0
Cutaneous affections,	4	2	0	9	8	0	4	4	0	7	8	0	7	8	0	6	6	0	3	4	0	1	1	0	1	1	0
Cachexia,	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhœa,	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	8	6	0	2	2	0	1	1	0	6	8	0
Dropsy,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dysentery,	11	11	0	10	10	0	13	15	0	27	25	0	7	7	0	24	21	0	8	10	0	23	21	0	61	58	1
Dislocations,	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delirium tremens,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fractures,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Remittent fever,	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intermittent fever,	24	27	0	43	46	0	50	61	0	104	105	0	45	43	0	62	56	1	61	60	0	89	80	0	116	118	0
Gonorrhœa,	2	2	0	3	3	0	0	0	0	0	0	0	4	4	0	5	5	0	0	0	0	1	1	0	1	1	0
Hepatitis, acute,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hepatitis, chronic,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inflammations, external,	5	5	0	5	4	0	1	1	0	0	0	0	2	3	0	4	2	0	13	13	0	2	2	0	3	3	0
Inflammations, cephalic,	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0
Inflammations, thoracic,	3	3	0	10	9	0	6	5	0	6	5	0	2	3	0	0	3	0	4	5	0	6	4	0	4	1	0
Inflammations, abdominal,	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	2	0	0	0	0	0	0	0	0	0	0
Mania,	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ophthalmia, acute,	2	2	0	2	3	0	2	1	0	7	8	0	14	12	0	2	2	0	6	4	0	3	10	0	2	2	0
Ophthalmia, chronic,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
Phthisis pulmonalis,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Rheumatism,	8	5	0	16	13	0	4	6	0	27	21	0	7	14	0	6	6	0	7	10	0	7	6	0	6	3	0
Spleen,	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0
Syphilis, primary,	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	2	2	0	2	2	0	1	1	0	3	2	0
Syphilis, secondary,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small-pox,	0	0	0	3	0	0	1	0	0	3	2	1	1	4	0	0	1	0	0	0	0	0	0	0	0	0	0
Ulcers,	30	29	0	5	5	0	4	6	0	18	17	0	5	4	0	4	4	0	12	11	0	6	8	0	12	11	0
Wounds,	4	4	0	5	5	0	10	8	0	17	17	0	3	3	0	3	3	0	6	6	0	6	6	0	4	3	0
Urinary organs diseased,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Anomalous Cases,	32	32	0	3	3	0	7	7	1	25	25	0	9	8	0	4	4	0	8	10	0	4	3	0	22	19	0

FINIS.